

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

BETTER FRUIT

VOLUME XI

AUGUST, 1916

NUMBER 2

ILLUSTRATED PACKING EDITION



THE ELBERTA PEACH

A delicious peach for eating. It is one of the best shipping varieties grown, a splendid canner, and is grown commercially more than any other peach. It is one of the best peaches for all-around purposes.

BETTER FRUIT PUBLISHING COMPANY, PUBLISHERS, HOOD RIVER, OREGON

Subscription \$1.00 per Year in the United States; Canada and Foreign, Including Postage, \$1.50.

Single Copy 10 Cents

26 Extra Features
73 New Conceptions

Mitchell

MID-YEAR
MODEL

\$1325
F. o. b. Racine

The Expert's Car

This Shows What Men Think of a Bate-Built Car

Most of the Mitchell sales in cities are made to very able men.

Our Chicago dealer, in one week, sold Mitchells to five big bankers. Our New York dealer—in the home of the critical—has ordered 2000 of this Mid-Year model.

Your nearest Mitchell dealer has a list of engineers—men of national fame—who selected the Mitchell. They chose this car, among 400 makes, because of its mechanical perfection.

Due to John W. Bate

The Mitchell's position among shrewd buyers is due to John W. Bate.

This great efficiency engineer designed all our factory buildings. They now cover 45 acres. He equipped those buildings with 2092 up-to-date machines. He trained our workmen.

The result is a model motor car plant. He has reduced our factory costs 50 per cent. No other plant in America, we think, could build such a car at our cost.

That is why such a car can be sold at our price. And why it includes 26 costly extras without any extra price.

Extra-Strong Parts

In the car itself Mr. Bate has worked out more than 700 improvements. He has spent 13 years on it. This is his 17th model.

Hardly a casting remains in it. But 440 parts are either drop-forged or stamped from toughened steel. He allows big margins of safety. He uses much Chrome-Vanadium steel. Important parts are all made oversize. The result seems to be a lifetime car. Six Mitchells have averaged 164,372 miles each, or over 30 years of ordinary service. And they are running still.

That is why men who get expert advice are buying this Mitchell now. They want a car which John W. Bate calls, "The best car I can build."

Now 73 New Touches

The Mid-Year Mitchell is our second 1916 model. It was completed after other new models came out. Our experts examined 257 of the latest models to get ideas for this.

So this Mid-Year Mitchell combines all the best attractions brought out in this year's cars.

In addition, it has 26 extra features—things other cars omit. Things like a power tire pump, cantilever springs, an extra-cost carburetor, an easy control, a ball-bearing steering gear, etc. You will find here the most complete car shown. You will find beauty, luxury and comfort in extreme. You will find the car which you will want when you buy a car to keep. Go see it. If you don't know your Mitchell dealer, ask us for his name.

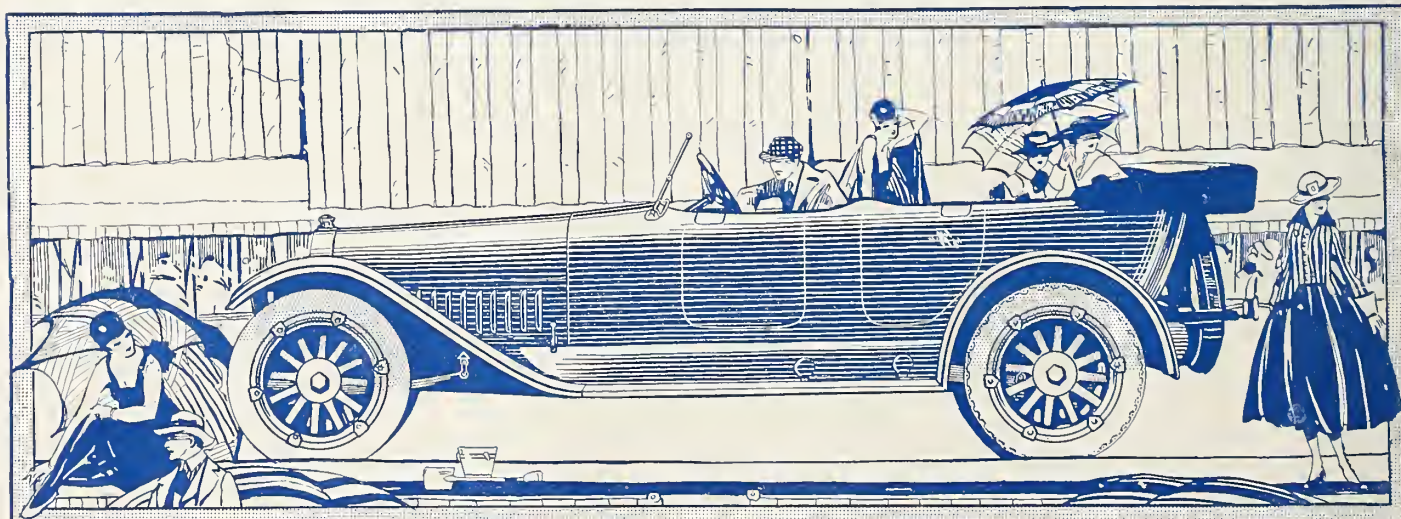
MITCHELL-LEWIS MOTOR CO.
Racine, Wis., U. S. A.

\$1325 F. o. b.
Racine

For 5-Passenger Touring Car or
3-Passenger Roadster

7-Passenger Touring Body \$35 Extra

High-speed economical Six.
48 horsepower; 127-inch wheelbase; complete equip-
ment including 26 extra features.



SIMONS, SHUTTLEWORTH & CO.

LIVERPOOL AND MANCHESTER

SIMONS, JACOBS & CO.
GLASGOW**GARCIA, JACOBS & CO.**
LONDON

Agencies and Representatives in Every Important European Market

European Receivers of American Fruits

FOR MARKET INFORMATION ADDRESS

Simons, Shuttleworth & French Co.
204 Franklin Street, New YorkSimons Fruit Co.
Toronto and MontrealSimons, Shuttleworth, Webbing Co.
46 Clinton Street, Boston**OUR SPECIALTIES ARE APPLES AND PEARS**

The Old Reliable

BELL & CO.

Incorporated

WHOLESALE**Fruits and Produce**112-114 Front Street
PORTLAND, OREGON

W. H. DRYER

W. W. BOLLAM

DRYER, BOLLAM & CO.**GENERAL
COMMISSION MERCHANTS**

123 FRONT STREET

PHONES: MAIN 2348
A 2348

PORTLAND, OREGON

Mark Levy & Co.COMMISSION
MERCHANTS**Wholesale Fruits**121-123 FRONT AND
200 WASHINGTON ST.
PORTLAND, OREGON**LEVY & SPIEGL**

WHOLESALE

FRUITS AND PRODUCE

Commission Merchants

SOLICIT YOUR CONSIGNMENTS

Top Prices and Prompt Returns

PORTLAND, OREGON

STORAGEShip your Furniture
to us to be stored
until you are located**TRANSFER & LIVERY CO.**
Hood River, Oregon**BUY AND TRY****White
River
Flour****MAKES
Whiter, Lighter
Bread****Richey & Gilbert Co.**

H. M. GILBERT, President and Manager.

Growers and Shippers of

**YAKIMA VALLEY FRUITS
AND PRODUCE**Specialties: Apples, Peaches,
Pears and Cantaloupes

TOPPENISH, WASHINGTON

**Orchardist
Supply House****Franz Hardware Co.**
HOOD RIVER, OREGON**W. van Diem**Lange Franken Straat 45, 47, 49, 51, 61
ROTTERDAM, HOLLAND

European Receivers of American Fruits

Eldest and First-Class
House in this BranchCable Address: W. Vandiem
A B C Code used; 5th EditionOur Specialties Are
Apples, Pears, Naval Oranges

Ask for Catalogue No. 5



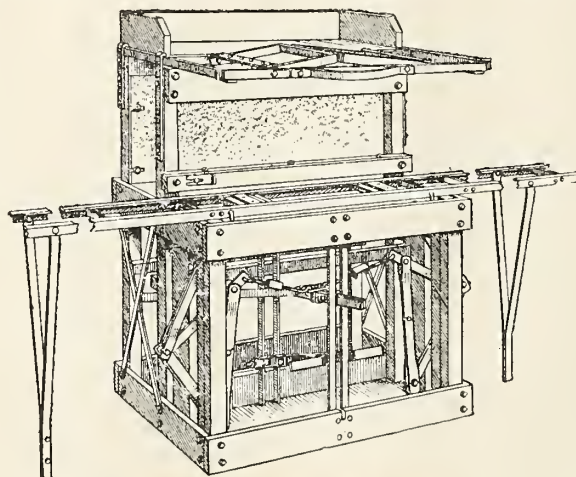
Barnett Picking Pail
Price \$1.50 each

THESE TWO well known picking utensils need no introduction. If your fruit is worth picking, these two articles must interest you; for they provide safety of your fruit, ease of filling and speed of emptying.



Portland Picking Bag
Price \$1.50 each
Per doz. \$15.00

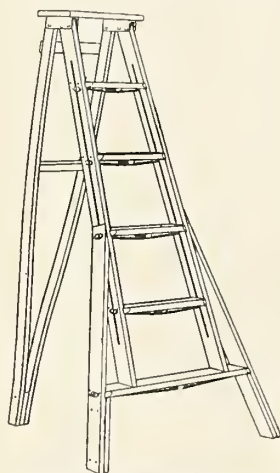
In the Northwestern Lid Press we offer you the maximum of speed in pressing and nailing up fruit boxes. The handling of the lids, placing same on the box and lining them up ready for pressing is automatic. It is provided with a reservoir holding 75 lids and a track on which the boxes come to the nailer. The time consumed in pressing is great-



Northwestern Lid Press

ly reduced and the finished product bettered.

**Price, with stripper and Track,
\$55.00**



Hardie Orchard Ladder
Stock lengths
6, 8, 10, 12 and 14 ft.
Price per ft. 35c

We here show two types of orchard ladders. Both are constructed of clear, well-seasoned spruce; thus possessing great strength while yet light in weight. They are both of well-chosen design; built to give you service and safety to the picker.



Hardie Apex Ladder
Stock lengths
8, 10, 12 and 14 ft.
Price per ft. 35c

Our complete catalog of orchard and packing house supplies should be in your hands. A postcard request will bring it.

The Hardie Manufacturing Company

49 North Front Street, PORTLAND, OREGON

BETTER FRUIT

AN ILLUSTRATED MAGAZINE PUBLISHED MONTHLY IN THE INTEREST OF MODERN, PROGRESSIVE FRUIT GROWING AND MARKETING

Packing Apples

By E. H. Shepard, Editor "Better Fruit," Hood River, Oregon.

BETTER FRUIT several years ago published the first edition of any horticultural paper devoted exclusively to packing apples, peaches, pears and cherries in boxes. Since then it has been the custom of "Better Fruit" to publish annually an edition devoted to packing. These editions have met with such splendid reception that it seemed wise to bring out a new edition on the subject each year, which has been done except in 1915. Since then so many requests have come in and the demand was so strong that it seems advisable to again devote space to this subject in this issue, in advance of the apple-packing season. Inasmuch as there are so many expert and trained packers in every section where apples are packed in boxes, it does not seem necessary to go into details as we usually have done in the past, and therefore in this issue we are presenting illustrations which show practically all of the commercial packs that are generally used at the present time, with two or three exceptions, namely, the 100 and 125 apples to the box. The 100 pack is composed of four rows of apples in a layer, with five apples to the row and five layers deep, making 100 apples to the box. The 125 pack is packed in a similar way, with five rows of apples, five apples to the row and five layers in a box, making a total of 125 apples to the box. These are the only two packs which have been introduced in recent years and are the only ones comparatively new.

Practically all apples are now packed diagonal pack. The Northwest has done away with the California Special, packing all of its apples in what is known as the Oregon Box or Northwest Standard, which is $10\frac{1}{2}$ by $11\frac{1}{2}$ by 18 inside measurement. With the illustrations in this number, it is comparatively a simple matter for any man, even with a limited experience in packing, to figure out how to put up each one of the different packs, as each illustration is an explanation in itself which is clearer than anything which

could be written. With these illustrations and the assistance of a trained packer, any man with an ordinarily good eye should be able to be a fairly good packer in a reasonably short time. Many inexperienced men in one season have learned not only to put up a first-class pack, but have gained sufficient speed so as to be able to pack anywhere from 50 to 80 boxes a day of ten hours.

The consumer, and the trade which is even more particular than the consumer, now demands a pack that is both standard and uniform. Uniformity refers more particularly to the size. Consequently packers should be very careful in putting up any of the packs to have all of the apples as near the same size as possible. Slight deviations in size are permissible where necessary at the end of the box, particularly on the top layer for the purpose of reducing the swell at the end so as to prevent bruising. Grading machines have become a big factor in developing more uniform packing. A number of good grading machines are now being made which will sort the apples almost perfectly as to size. Some machines are built on the measurement principle, while some grade on the weighing principle. The weighing principle is very reliable and the measuring principle is also very reliable, particularly where the measuring device is arranged so that all of the apples will be measured the same way. By that is meant, in order for the measuring machine to give exact results, it should measure all of the apples either from cheek to cheek or from stem to calyx. Some machines are built so as to measure both ways at the same time.

Packing is purely mechanical, and as already stated in this article, there are sufficient packers in the Northwest who understand the business sufficiently well to train any additional number that may be required to handle this year's crop. From an experienced packer, a novice in three or four days' instruction can learn the principles of packing sufficiently well to put up a

first-class packed box if he will only be careful in doing it to take his time about it. A novice should bear this in mind and never forget it: "Haste makes waste." In other words, if the novice endeavors to pack fast, his pack will be poor. Packing apples is like learning to write. You learn to write slowly but correctly; you must do so if you ever expect to write a good hand. It is the same with packing; you must learn to pack correctly, no matter how slow you go at first, if you ever expect to put up a good pack. If you follow this advice and go slowly, speed will come of itself and in a few weeks you will not only be able to put up a first-class pack but do it rapidly.

The other feature of packing which is of prime importance is grading. In many districts, the packer does his own grading. However, with the advent of the grading machines, experts on grading are now employed to grade the apples into the Extra Fancy, Fancy and C grade, relieving the packer of this responsibility to a certain extent, but the packer should always bear in mind that it is his duty, if he wants to be square with himself and the man he is working for, not to pass any apple in the grade that does not belong there.

Packing is pretty well understood; grading is not so well understood, and furthermore grading has never been as thoroughly and properly done in the past as it should be. Therefore it is to be hoped that this year will show marked improvement on grading apples. **Improvement is absolutely necessary. Three or four inferior apples in a box spoil the grade and reduce the value of the box to the value of the next lower grade.**

Experienced men should be used for grading. The grower is responsible for the grade. There is no job in the orchard which should have closer attention on the part of the grower than the job of grading. Grading is a matter of judgment, but there are rules and regulations covering it, so that any man who wants to can learn to grade and grade properly. There is nothing connected with harvesting a box of apples more important than making the grade correct and true. In other words, standardization is demanded by the consuming public, and if we expect to get the price for a box of Extra Fancy apples the grade must be absolutely Extra Fancy in every respect, without a single exception.

While discussing the subject of grading it also seems proper to discuss briefly the different grades. Extra Fancy, generally speaking, is fairly

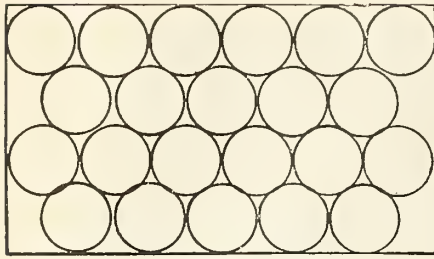


Fancy Pack of Winter Nelis and Beurre Easter Pears. The sizes are as follows: Winter Nelis, 180, 5-tier; three boxes of Beurre Easter, sizes 68, 72 and 82, all 4-tier.

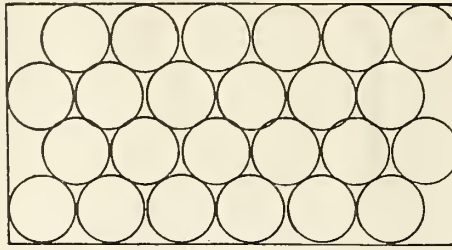
(Continued on page 7.)

Illustrations for Apple Packs in the Standard Apple Box

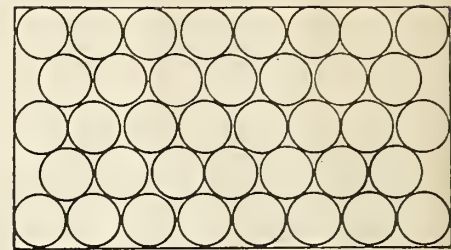
10½ x 11½ x 18 Inches, Inside Measurement



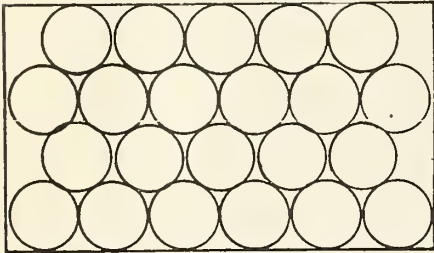
First and Third Layers



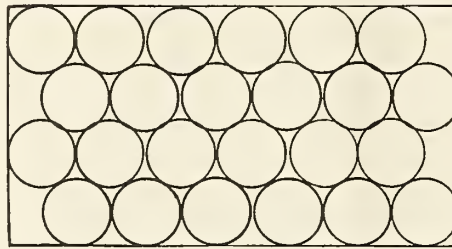
First and Third Layers



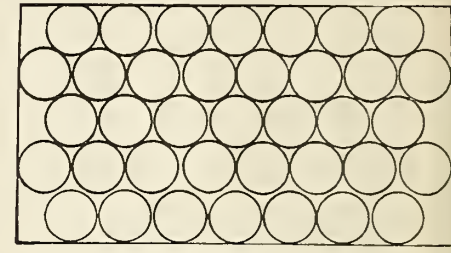
First, Third and Fifth Layers



Second and Fourth Layers
Diagonal 2/2 pack, 4 layers, 88 apples



Second and Fourth Layers
Showing diagonal 2/2 pack, 4 layers, 96 apples



Second and Fourth Layers
3/2 pack, 4½ tier, 5 layers, 188 apples
If layers are reversed there will be 187 apples

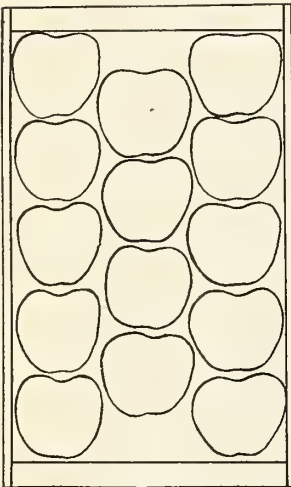


Figure 1—41 Apples
Northwest Standard Box

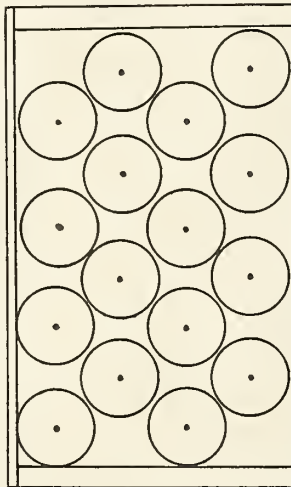


Figure 7—64 Apples
Northwest Standard Box

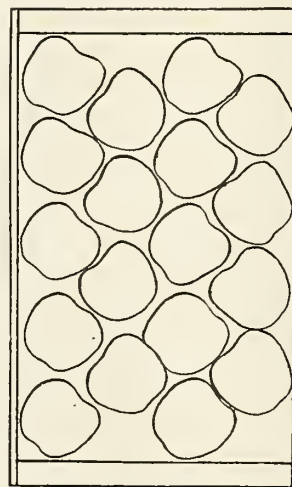


Figure 8—72 Apples
Northwest Standard Box

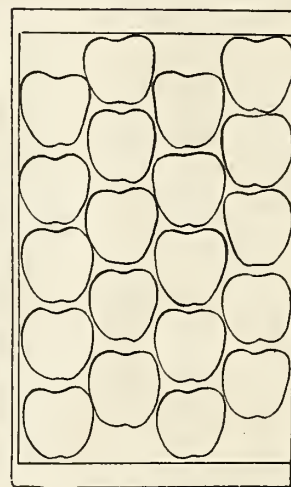


Figure 10—80 Apples
Northwest Standard Box

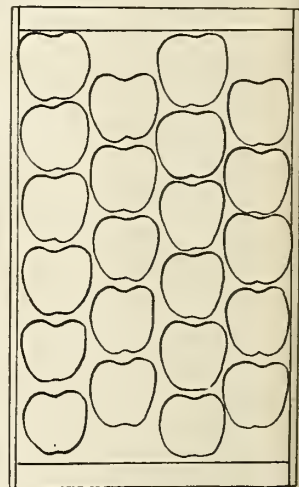


Figure 12—88 Apples
Northwest Standard Box

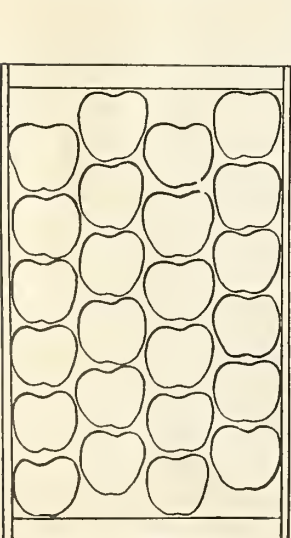


Figure 13—96 Apples
Northwest Standard Box

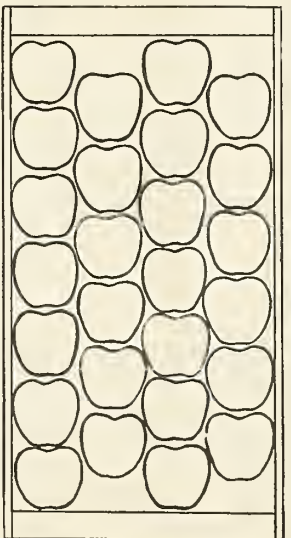


Figure 16—104 Apples
Northwest Standard Box

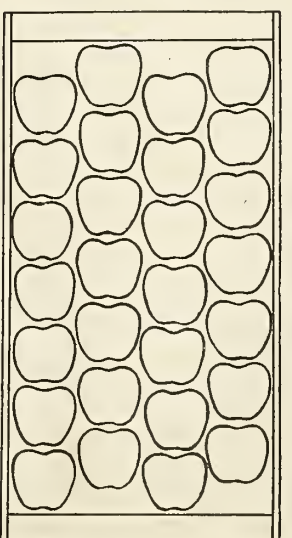


Figure 18—112 Apples
Northwest Standard Box

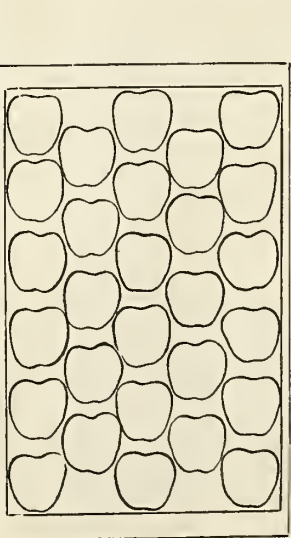


Figure 24—138 Apples
Northwest Standard Box

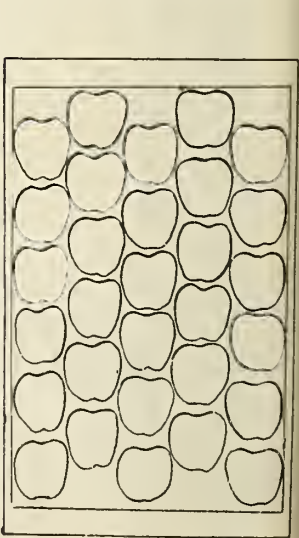


Figure 26—150 Apples
Northwest Standard Box

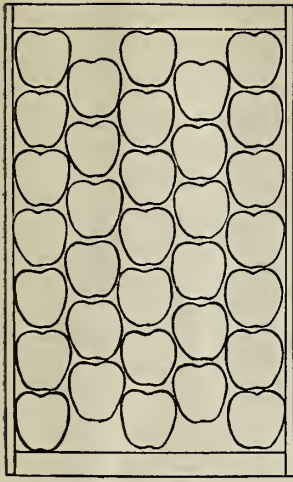


Figure 28—163 Apples
Northwest Standard Box

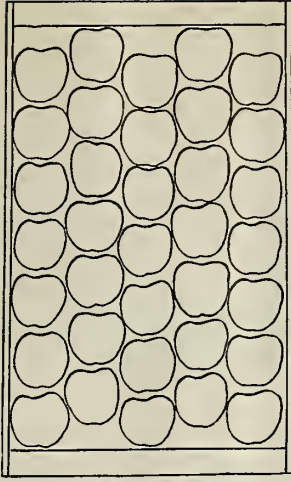


Figure 29—175 Apples
Northwest Standard Box

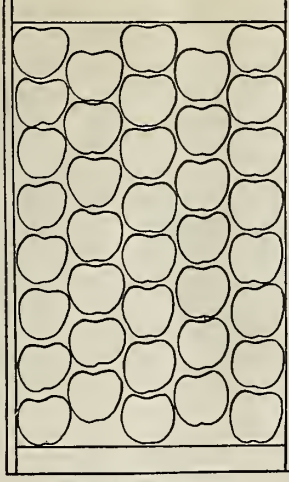
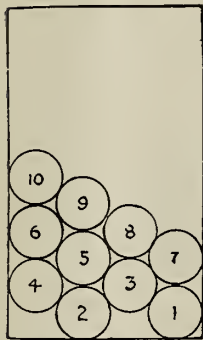
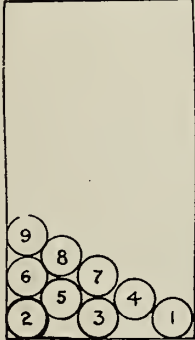


Figure 31—188 Apples
Northwest Standard Box



How to Start a 2/2
Diagonal Pack



Diagonal Pack
How to Start a 3/2

Packing Apples

(Continued from page 5.)

well done, but in the Fancy grade the grower usually falls down for the reason that he hates to see anything go into the C grade because the price is so much lower, but his worst fault probably is in the C grade, for the grower usually argues this way: "If this apple does not go into the C grade, it must go to the vinegar factory at only six dollars per ton." Extra Fancy and Fancy apples in average seasons usually bring the growers fair prices. The C grade seldom gives satisfactory returns. The reason for this is that usually in the C grade the grower puts in everything that is left after the Extra Fancy and Fancy are packed out. Consequently the C grade in past years has contained a lot of poor apples which were either badly affected by worm stings, aphids or fungus. If the fruit-growers of the Northwest expect to continue to put up a C grade and get back satisfactory returns after harvesting and selling expenses are taken out, they will have to bear this fact in mind: they must put a better C grade in 1916 than they have any year in the past. Careful investigations of returns on C-grade apples, particularly on ordinary varieties, lead to the conclusion that C grade pay the grower comparatively little, if any, profit. If a profit is to be made on C-grade apples, then more care must be taken in leaving out stung apples, aphid apples, fungus apples and others affected with any other kind of a disease.

The greater part of the apples produced in the Northwest are sold either in the Middle West, the South, the East or exported. Careful observation and investigation points to the final conclusion that if C grade is to be packed, it must be a better grade in the future than it has been in the past, for the reason that C grade, particularly in ordinary varieties, has not shown the grower a satisfactory net profit. There is a belief, which we have long entertained, which is growing constantly, that sometime in the near future the Northwest will decide, and decide wisely, to pack only two grades, the Extra Fancy and Fancy, the latter including in addition to Fancy the first-class apples of what now go in the C grade; the balance should be sent to the vinegar factory. This suggestion is thrown out in advance for consideration for the reason that it is our belief that sometime in the near future it will be the advisable method to adopt.

This year the Northwest is entering on a new era, so to speak, under the auspices of the Fruit Growers' Agency, originated, created and fathered by the Bureau of Markets in the Department

of Agriculture. We are going on the market under a uniform contract; we have taken a stand for uniform pack and standardization, and therefore it ought to be evident that we will be critically judged this year. If we make good this year, we will have established a reputation for uniformity and standardization. We must pack a product of known value. Every car should be standard so it can be sold on guarantee without inspection. The business world, the consumer, the government, are all demanding standardization. The Northwest has publicly stated that the Fruit Growers' Agency will supervise standardization. It is a critical year; the responsibility is on our shoulders, on every grower's shoulders, individually. **WE HAVE ASSUMED THE RESPONSIBILITY; WE MUST MAKE GOOD. WE CANNOT FAIL. WE WILL NOT FAIL.**

A large grower and operator of apples in one of the past issues of the Chicago Produce News advises growers to take up the matter of marketing and distribution now, instead of waiting until the harvesting time. Mighty good advice.

The Eugene Fruit Growers' Association, under the able management of Mr. J. O. Holt, organized in 1908, doing a business of \$6000, has met with wonderful success, showing a volume of business done in 1915 of \$225,000.

The Winter Nelis pear crop is reported to have suffered more severely than any other variety of pear. Apparently the Winter Nelis will be scarce and will bring good prices.

The Libby, McNeill & Libby fruit cannery is a big factor for the fruit industry in the district surrounding The Dalles. There is nothing like a good cannery to help take care of the surplus and save the waste.



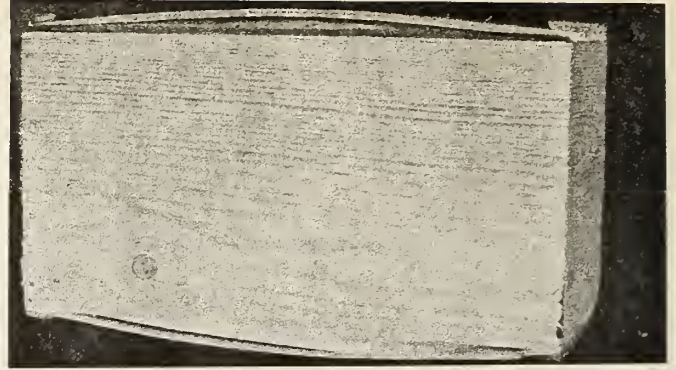
Anjou Pears



A Perfect Box of Bartlett Pears



Illustration showing a box of Winter Nelis 150, 5-tier, and Beurre Easter, 100, 4-tier.



Showing the proper bulge on a box nailed and ready for shipment

Securing Organic Matter in Orchard Soils

By J. R. Mattern, Julian, Pennsylvania

STARING every orchardist in the face is the problem of getting sufficient vegetable matter into his soil to keep up proper moisture and fertility conditions. It is a well-known fact among modern soil experts that organic matter has a great deal to do with the moisture storage capacity of soils, and in connection with moisture the organic matter determines the bacterial activity in the soil, and therefore the amount of natural plant food available.

On a grain or stock farm the problem is simpler, because there are no trees to hinder free cultivation with broad implements, and no roots to interfere with deep plowing. Once the trees are started, the ground cannot be plowed more than seven inches deep without damaging the roots. If manure is applied the weeds that spring from the seeds are exceedingly hard to kill by cultivation, and smothering crops cannot be used in an orchard as they can in an open field.

The one remaining method of securing the organic matter is by the use of cover crops, or what some educators call green-manure crops. The fundamental idea in this is to plant something that will make a luxuriant growth of tops and roots, and then work the material grown into the soil. Legumes such as crimson clover (where it will grow successfully), vetch, cow-peas, and soy beans are best when they can be grown, but sometimes the soil is too much run down, or too rough to permit of these finer plants catching. Rye, wheat, turnips, millet and other such plants then are better.

Still the chief problem is not solved, for attention to the top seven inches of soil that the plows will reach will not always grow a good orchard. It is necessary to get the organic matter deeper than this—down there is the real feeding place of the roots. Roots of the cover-crop plant alone can reach this soil, and they will not do so unless the way is opened for them by deep tillage. By subsoiling an orchard site with plows before the trees are planted, you can accomplish much good. A better way is to do it with explosives at the time the trees are

planted, and every five or ten years afterwards.

Too much importance cannot be attached to this subject of filling the soil with roots down deep, where they provide organic matter for bacteria to feed on, and to aid in both the storage of moisture and the liberation of insoluble plant foods. Only a few orchardists understand the value of the practice, but the experiences of these few are illuminating. Clean cultivation or intercrop practice, it makes no difference if the land is cultivated during the weeks from April till in July, just so the cover crop is sown each year, in soil that has been given intensive tillage down deep, there will be abundance of growth and overabundance of fruit.

A New Wave of Prosperity

It is most gratifying to note the preparations being made to save the by-products heretofore wasted by the Western fruitgrower. This has been brought about largely by the prohibition of liquor retailing in the several Northwestern States. Along the west slope and Willamette Valley a fortune has been spent in hydraulic presses and equipment for making loganberries into soft drinkable beverages. This means prosperity to our valley growers and profits to the several enterprising concerns that have equipped

themselves with plants for pressing and bottling. While the present season's crop of loganberries in the Willamette Valley represents a value in excess of a half million of dollars, it is small when compared with the by-products to be saved from apples. Evaporating Plants, Apple-Butter Cookers and Hydraulic Presses are all coming into great demand and the good old-time cider will be replaced by a more choice and higher grade of beverage made from the small or slightly under first-quality apples. The "Apple-Ju" produced by the leading Salem concern is strictly a high-grade beverage, sanitary, sparkling and delicious, and hundreds of tons of apples will find a profitable market value where heretofore they have been thrown away.

The fact that single contracts amounting to over twenty thousand dollars have been entered into this season for hydraulic-pressing machinery is proof of the importance of the preparations being made to save and turn the by-products into profit.

I will not attempt to go into lengthy details in this article, but should any reader desires to know more regarding the manufacturing of by-products and the proper equipment required for same, their inquiries will be given prompt attention if addressed to U. D. Maxson, 308 East Salmon Street, Portland, Oregon.—[Adv.]

Florida, up to the middle of April, had shipped 17,095 cars of oranges and 4741 cars of grapefruit.



High Class Pack of Pears, Packed at Medford, Oregon

Blast holes for trees and give the roots more pasture

A tree in a blasted bed (at left) roots deeper, grows faster and bears earlier than a tree set in an ordinary dug hole (at right).

"The soil is the pasture in which the roots of the tree feed," says the Wyoming Experiment Station. "Blasting enlarges the root pasture, breaks up the hardpan and subsoil and permits the roots to go down and get plenty of food."

Plant your fruit trees in beds blasted with

GIANT FARM POWDERS

STUMPING — AGRICULTURAL

—Eureka Stumping or Giant Stumping—which are made especially to meet Pacific Coast farm and orchard conditions. They pulverize the subsoil better than ordinary dynamites which often act too quickly and pack the earth.

Book "Better Orchard Tillage," FREE

It tells and shows how to give your trees more pasture; how to blast for planting and how to increase the crops of bearing trees. Other books—on Stump Blasting, Boulder Blasting, Ditch Blasting and Subsoil Blasting for farm crops—are also sent free. Mark in the coupon the books that you prefer.

Because the superiority of Giant Farm Powders is so generally acknowledged, other explosives are frequently offered as "giant powder." Insist upon having the genuine—always bearing the Giant brand.

THE GIANT POWDER CO., Con.

HOME OFFICE: SAN FRANCISCO

"Everything for Blasting"

Distributors with magazine stocks everywhere in the West



FREE BOOK COUPON

THE GIANT POWDER CO., Con.
202 Kohl Building, San Francisco.

Send me your illustrated books on the subjects which I have marked X:

- ☐ Stump Blasting
- ☐ Boulder Blasting
- ☐ Subsoil Blasting
- ☐ Tree Planting
- ☐ Ditch Blasting

Name _____

Address _____

Write below your dealer's name.

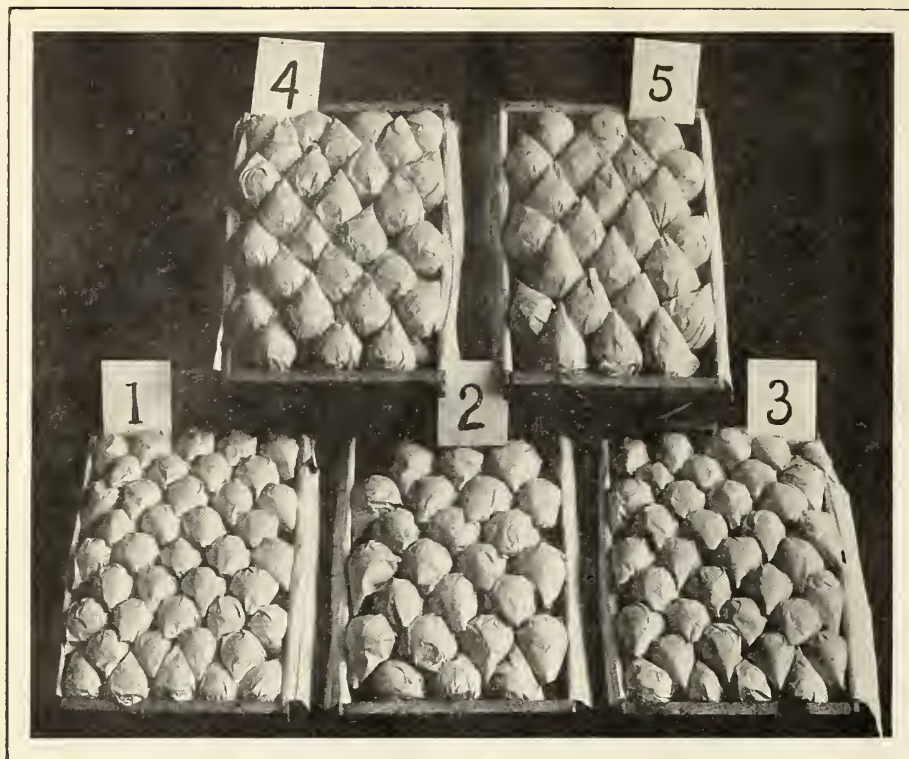
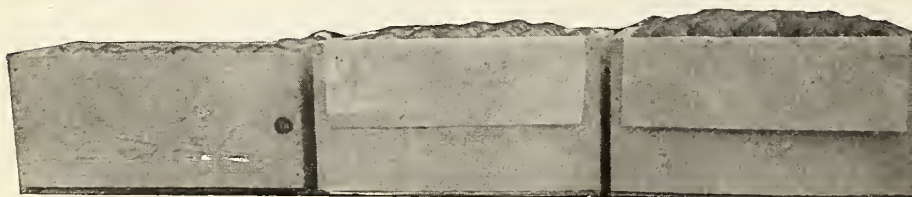


Photo by T. Gagnon, Wenatchee, Washington
Packed for the Longview Orchard Company, Wenatchee, Washington
(1) 200 pears; (2) 120 pears; (3) 180 pears; (4) 140 pears; (5) 96 pears



Three boxes of apples, showing one packed too low, one just right, and one too high

Handling Fruits for Distant Markets

[Office of Information, U. S. Department of Agriculture.]

THE importance of careful picking and handling in preventing decay in such fruits as cherries and prunes is brought out in Bulletin 331 of the United States Department of Agriculture, which contains a report of experiments conducted with these fruits in the Willamette Valley, Oregon. Hitherto it has not usually been found profitable to ship fresh cherries and prunes from this region to distant markets because of the unsatisfactory condition in which the products arrive. These investigations demonstrate that a great part of the decay can be prevented by

the exercise of proper care, but that unless care is exercised there is little hope of disposing of the fresh cherry and prune crop of this region in distant markets. The facts brought out in the investigation are believed to be applicable also to other sections of the country. The losses which shippers of cherries and prunes experience are due chiefly to brown rot and to other fungi which gain entrance through abrasions in the skin, or other injuries to the fruit. The brown rot must be controlled by proper orchard practice. On the other hand, the loss from those

forms of fungi which do not attack healthy, sound fruit can be minimized by careful handling.

In order to demonstrate this fact the investigators stored various lots of carefully-handled fruit and of commercially-handled fruit for varying periods in a refrigerator car, in which the conditions were made as nearly as possible identical with those under which the fruit would travel in actual commercial practice. At the end of five days in the iced car, the carefully-handled fruit showed an average of only 0.5 per cent of decay, while the commercially-handled fruit showed 2.8 per cent of decay, or practically six times the amount. At the end of ten days the carefully-handled fruit had 1.5 per cent of decay, and the commercially-handled lots 12.3 per cent, or eight times as much. Ten days is approximately the time required to ship fruit from the Willamette Valley to Chicago. Similar results were obtained from experiments with prunes, although with them the percentage of decay for both commercially-handled and carefully-handled fruit was smaller than with cherries. It is pointed out, however, that although every effort was made to have the conditions approximate those in actual transportation, it is probable that the fruit kept better in the iced car used for these tests than it would in the ordinary refrigerator car in transit.

Experiments were also conducted both with carefully-handled and commercially-handled fruit to determine the value of precooling before placing the fruit in the refrigerator car. These tests show that precooling is undoubtedly of value. On the other hand, it cannot be relied upon to prevent losses due to careless handling. Injured fruit will decay whether it is precooled or not, and for this reason precooling is not recommended unless it is preceded by adequate care in picking and packing. It is also pointed out that any delay between the picking and the shipping of fruit hastens decay. The amount of damage done in this way will vary, of course, with the weather conditions, but under any circumstances it is considerable.

In view of these facts it is recommended that every precaution should be taken in picking the fruit not to bruise it, and that it should be transferred as few times as possible from one container into another. While it is being held in the orchard after picking

The Three Leading
Cold Storage
Warehouses in
the New York
District

THE MANHATTAN REFRIGERATING COMPANY

Located on N. Y. C. R. R. tracks
West Washington and Gansevoort Markets, New York City

UNION TERMINAL COLD STORAGE COMPANY

Located on Erie Railroad and D. L. & W. R. R. tracks
Jersey City, New Jersey

KINGS COUNTY REFRIGERATING COMPANY

Wallabout Freight Station, Wallabout Market, Brooklyn, N. Y.

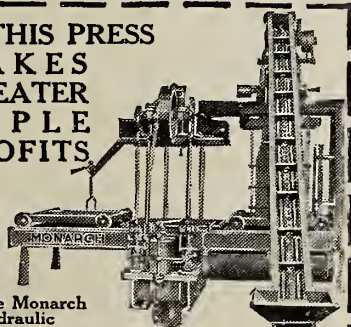
General Offices, 525 West Street, New York City

T. A. Adams, President

it should be kept in the shade and the hauling wagon should be provided with good springs and covered with canvas in order to keep off sun and dirt. In grading, all damaged fruit should be culled out, and as soon as the shipment has been packed it should be placed in the refrigerator car. The extra expense of careful handling, it is said, will be more than offset by the reduction of losses from decay and the ability of the fruit to maintain itself in good condition while exposed for sale. If these suggestions are adopted generally by fruitgrowers and in consequence a larger proportion of the crop marketed fresh, it is believed that the industry will benefit greatly and its extension will be made profitable. That this fact is being recognized by fruitgrowers is indicated by the co-operation afforded the Department in its investigation by the growers in the Willamette Valley.

The United States Department of Agriculture, through the Office of Markets and Rural Organization, has employed a large number of able men for investigation and market report work during the coming season. The government will open offices and carry on this work from some of the principal consuming centers in the United States, among which may be mentioned New York, Boston, Chicago, Philadelphia, Buffalo, Kansas City, St. Louis and Pittsburg. As rapidly as possible offices will be opened and the work carried on in a number of other important cities, which may include Cleveland, Detroit, Milwaukee, Sioux City, Des Moines, Indianapolis, Columbus, St. Paul and Denver. It is evident that the government has fully realized not only the importance and the value of the fruit industry, but the necessity of giving the fruitgrowers, marketing agencies and distributors all such information as is possible which will be helpful to them in marketing their crop to the best possible advantage. These offices will report the number of cars of different kinds of fruit arriving daily, and it is understood will give considerable information about prices as well.

THIS PRESS MAKES GREATER APPLE PROFITS



The Monarch
Hydraulic
Cider Press

is suitable for both individual and merchant service. With it you can work up all the culls into profitable cider. Our celebrated high pressure design, combined with minute accuracy in construction, produces maximum quantity of juice from the apples with low operating expense. Monarch Presses are built in sizes having capacities from 15 to 400 barrels a day. 60-page Press Catalogue explaining the numerous exclusive Monarch features sent free on request. Write for this instructive book to-day.

Western Farquhar Machinery Co.
308 E. Salmon St., Portland, Ore.

We also manufacture Engines, Saw Mills, Thrashers, Potato Diggers, Grain Drills, Cultivators.



"I wish I were an artist"

How often have you heard that expression? You are probably an artist in YOUR PARTICULAR LINE of business.

We Are in Ours

Let OUR ARTIST paint your picture. The superior value of color display properly executed cannot be disputed.

We Excel in High Grade

Show Cards, Cut Outs, Hangers, Posters and Booklets, and all classes of advertising matter.

For samples and other information address Advertising Dept.

Schmidt Lithograph Co.

SAN FRANCISCO

Los Angeles Fresno Portland Seattle Salt Lake City Honolulu



Helps you up
"On High"

Red Crown the Gasoline of Quality

puts the "hop" into your car, gives you the quick "get-away", and the "pick-up" on the hills. It's because Red Crown is the unmixed, refinery gas, with extra power in every drop. At dealers everywhere and at our SERVICE STATIONS.

Standard Oil Company
(California)



"Wenatchee" Fruit and Vegetable Picking Bags

(Patented April 27, 1915)

This bag is emptied by releasing a snap. The bag will hold about a bushel. When snapped at the frame it will hold about a half bushel. The frame is made of steel, the canvas is 10-oz. and every point is reinforced with leather where from experience it has been found necessary. **Price \$1.75 post paid** to all parts of the United States where we have no agents.

Wenatchee Hardware Company
Sole Manufacturers Wenatchee, Wash.

OUR SPECIALTIES

BOX APPLES and the PEACHES three big P EARS RUNES

We handle more box apples that any concern in Ohio and want to hear from every grower and shipper who will have either large or small lots to offer.
Let us hear from you at once.

I. N. PRICE & CO., CINCINNATI, OHIO

REFERENCES: ANY BANK OR CREDIT AGENCY

Hogs and Sheep in the Orchard

By Gordon G. Brown, Horticulturist, Hood River Experiment Station

THE question of the practicability of allowing hogs or sheep in the orchard for pasture is an old and mooted one, yet one on which additional light is being thrown each year. Data is being collected by the local Experiment Station which should enable the orchardist to judge for himself, approximately, the desirability or undesirability of such a plan under his own particular conditions. The fact that the 1915 report of this station is not yet in the hands of the growers causes the writer to feel that a few remarks on the subject will be in order here and at

this particular time. Undoubtedly here, as elsewhere, many orchardists will throw up their hands in horror at the suggestion of allowing hogs, and especially sheep, the privilege of unrestricted roaming in the sacred and respected domains inhabited by the fruit tree. This view is especially taken because of the well-known tendency of the former to root up the ground badly, and of the latter to eat the bark of the trees. However, experimental data collected locally indicates that there is much merit in the plan of hog or sheep pasturing of the orchard.

What are some of the advantages of such a plan? What are some of the economic factors as well as scientific factors involved, because upon these points the desirability or undesirability of the whole scheme rests? In other words, increasing the output of marketable products from a given area of land and with a given capital without unduly increasing the expenses involved are the features to be emphasized. Under certain conditions which the writer will attempt to enumerate the pasturing plan appears feasible and desirable under Hood River Valley conditions. Briefly, the advantages of pasturing the orchard may be summed up in the following manner: (1) All of the land is fully utilized. In other words, it is being fully employed for the production of readily marketable crops. (2) Leguminous manurial crops are usually grown which, when eaten, are returned to the soil in a quickly available form. (3) Unless pastured too closely there is sufficient crop to turn under for green manure after the season is over or the crops begin to run out. (4) Where legumes are grown their nitrogen-fixing abilities are to be recognized and appreciated. (5) Where crop is pastured labor is saved in cutting, curing and handling. (6) Where good animals and good pasture crops are provided, cheap and economical gains are made. (7) Green succulent pasture when thus utilized is worth more relatively than its market value after expensive labor has been used in putting it up in the form of hay. (8)

More products are secured from a given area without greatly increasing the cost. Hence increased net returns.

There are few conditions which usually obtain in the orchard itself that do not make such a plan feasible. Other factors such as housing, breeding, killing, marketing, etc., are not touched upon here. Of course in very young orchards where an abundance of succulent foliage and small limbs are directly exposed it is doubtful if it is advisable to turn other than very small shotes in for pasture. Also the whole subject must be viewed in the light

THE Pride of Oregon Apple Sizer

NO NOISE

Simplest in Construction.

No Machinery to get out of order.

Efficient and Economical.

LOW PRICES

MANUFACTURED BY

J.R. NUNAMAKER & CO.

1210 C Street
HOOD RIVER, OREGON

Send for descriptive matter and testimonials.

Please mention "Better Fruit."

Extra dollars in dairying



The fruit-grower who has other sources of income besides his orchard can rest easier! Nothing is so profitable and sure as dairying. Always a market for your product. Does not require

a large investment of money or time.

Silage is the money-making feed for dairy cows. It supplies a green, succulent feed in winter-time when hay is high. Takes the drudgery out of feeding.

Over 60,000 American dairymen and farmers have made Indiana the "Universal Silo." We would like to tell fruit-growers about our easy payment plan on the "Indiana." You can pay for it while it is earning its cost.

**INDIANA
SILO**

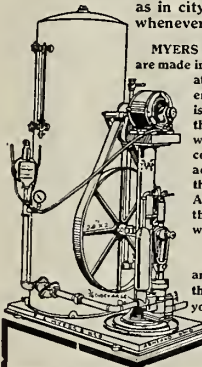
Built on the Pacific Coast by

THE CHAS. K. SPAULDING LOGGING CO.
SALEM, OREGON, U. S. A.

MYERS HYDRO- PNEUMATIC PUMPS FOR THE HOME WATER SUPPLY

Every Woman and every member of any family living in the country, small town or village, will enjoy reading our new Catalog, telling all about MYERS HYDRO-PNEUMATIC PUMPS, and how they have brought to the door of every home—yours included—such conveniences as a bath room, toilet, and running water in the kitchen and laundry—

water at the turn of a faucet, same as in city residences, wherever and whenever wanted.

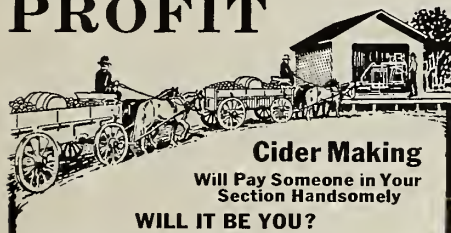


MYERS HYDRO-PNEUMATIC PUMPS are made in many styles and sizes for operation by hand, windmill, gasoline engine, or where electric current is available, by motor. These are the pumps that pump air and water into a pressure tank. This compresses the air in tank which acts as a reserve power forcing the water to any point desired. An equipment is easy to install, the upkeep is nominal and the water service excellent.

You are tired carrying water and want to know more about this modern way, and how easily you can now have a successful private water system in your own home. Our Catalog will tell you. Write for it.

F.E. MYERS & BRO. 120 ORANGEST. ASHLAND, OHIO.

Turn Apple Waste to PROFIT



Cider Making

Will Pay Someone in Your Section Handsomely

WILL IT BE YOU?

Start a paying business that grows almost without effort. Thousands are making **Big Money** turning apple waste into profits for their neighbors by making **Good Marketable Cider** from wind-falls, culls, undergrades, etc., on

Mount Gilead Hydraulic Cider Presses

Sizes 10 to 400 bbls. daily. We also make cider evaporators, apple butter cookers, vinegar generators, filters, etc. All machinery is fully guaranteed. All power presses have steel beams and sills. Write today for catalog.

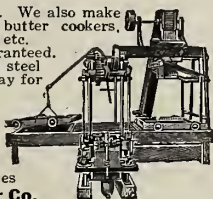
HYDRAULIC PRESS MFG. CO.

60 Lincoln Avenue
Mt. Gilead, O.

Pacific Coast Representatives

The Berger & Carter Co.

17th and Mississippi Sts., San Francisco, Cal.



For Rent on Shares

A very fine Hog and Fruit Ranch in Hood River district; everything in first-class order. 100 acres in bearing orchard, 50 acres clover and alfalfa. An excellent opportunity for the right man. Applicants should write, giving full particulars of themselves, their experience and their ability to properly manage the property.

W. J. BAKER

HOOD RIVER, OREGON

of shade or cover crops and their manurial action, which is a big subject in itself and will not be discussed here. Usually where a cover or shade crop is sown primarily for green manurial purposes it is practical to pasture, as the manurial action is quickened. The subject of the availability of water for use both for pasture and fruit crop at the critical periods must also be viewed in the light of practical results. Just how such a plan will fit in with a permanent rotation in the orchard, labor distribution, etc., must also be considered.

The writer wishes to call attention to the observations made by the Hood River Experiment Station during the season of 1915 in the lower valley on sheep pasturing. Mr. R. W. Allen of the Umatilla Experiment Station was then in charge of the work. It will be well to observe that this is a class of animals which can be maintained without the use of grain and fattened for market solely on grain forage. Such being the case, it was thought desirable to note the gains made on the leguminous crops such as clover or alfalfa, and to study such other factors that indicate the desirability or undesirability of sheep pasturing in the orchard. It is important to note that owing to the shortage of sheep within reach of the district individuals were taken for the test that were considerably below normal in standard. The ewes wintered poorly and the lambs were small. On June 18, eight ewes and as many lambs were put on an acre of clover in a bearing apple orchard. At this time the ewes averaged 81 pounds each and the lambs 26 pounds each. At the end of twelve days the ewes showed an average of four and one-half pounds gain each, and the lambs fourteen and three-quarter pounds each. On August 9th, when the experiment terminated, the ewes had made a gain of three pounds each, while the lambs showed an average gain each of 63.7 pounds for the fifty-two-day period. This shows a daily gain of 1.2 pounds each during the entire period. Sixteen head of animals were kept for the first three weeks on one acre of clover. At the end of this time they were transferred to an area of equal extent for one week. During this time the clover was eaten approximately half off. Owing to the fact that the fence became broken no further data was collected and the animals given a wide range.

The experiment indicates that during the early season before the lambs are feeding extensively eight ewes and as many lambs may be kept on two acres of clover pasture; later three acres will be required. These are results of preliminary work here and it is hoped more trials may be made this year and further observations. Owing to the fact that sheep can be purchased in the spring not far from Hood River Valley, it appears feasible for them to be bought at this time, kept in the orchard pasture during the summer and sold in the fall. Tests made with hogs were even more favorable from an economic standpoint. In one experiment near

NO-BRUZE

The most practical fruit picker ever invented. Will cut the stems of Apples, Oranges, Peaches, etc., without touching the fruit, which falls into the cloth tube and is caught by the hand. All fruit within reach. Light yet strong; easily operated; polished hard Maple handle; tempered steel blade; guaranteed.

Complete

Size	Price
4-ft.	\$1.50
6-ft.	1.75
8-ft.	2.00
10-ft.	2.25
12-ft.	2.50

Ask your dealer or remit direct and your order will be filled by Parcel Post.

F.A. SCHWARTZ

3741 Broadway, CHICAGO, ILLINOIS

What Fruit Auction Does for Shipper

- It sells your goods publicly. You yourself, or any representative, can attend the sales and see your shipment sold.
- It remits you your proceeds the day after the sale.
- It sells to the highest bidder after open competition.
- It procures for you the widest distribution.
- It procures for you the highest market price on the day of sale according to the quality and condition of your shipment.
- It permits you to withdraw as at private sale.
- It charges you less and returns you more.

No. 6.

(Adv.)

No Chicken Mites or Lice

ONLY USE MY DEVICE

Plans 50c

WILLIS BRADLEY, Hood River, Oregon

Come and Live
and Prosper—

**ORCHARDING in
NEVADA COUNTY,
CALIFORNIA**—the Grand-Prize-
Winning Home of the Bartlett Pear

CLIMATE ideal for fruit-raising—ideal for health. Altitude (2500 feet) just right for healthy orchards and healthy orchardists. There's money in Bartlett Pears and Nevada County, California, grows the best in the world. Won the highest award at the Panama-Pacific International Exposition.

Land values have not been boosted sky-high here. Good acreage along the railroad costs but \$40—only \$100 just outside the city. Write for literature to

CHAMBER OF COMMERCE, Grass Valley, California
or **Promotion Committee**, Nevada City, California

We carry in Portland
Stock Labels for Apples, Pears,
Strawberries and
Cherries

Can make shipment of
Printed Stock Labels in 24 hours.
Send for Samples
and Prices

ATTRACTIVE
FRUIT LABELS
REASONABLE

THE SIMPSON AND DOELLER CO.
1423-24 NORTHWESTERN BANK BLDG.
PORTLAND, E. SHELLEY MORGAN, MANAGER. OREGON.

To Apple Growers and Shippers

We have recently completed a fire-proof warehouse and cold storage plant, that is up-to-the-minute in facilities and efficiency.

Built of reinforced concrete and brick, equipped with the Henry Vogt absorption system of refrigeration, with cold storage capacity available for public storage of approximately 75 cars.

We have double trackage inside the building, enabling the spotting of six cars at one time at our unloading doors.

We offer perfect storage, low insurance, no drayage or switching charges, and quick service to all that territory east and south served by the C. M. & St. P., I. C., C. R. I. & P., C. B. & Q. in connection with G. N. and the C. & N. W. R. R. Companies.

Storage in transit rates in effect via all roads.

We would be pleased to hear from shippers who contemplate serving trade in Southern Minnesota and Iowa, and desire to do so quickly when the time comes.

We can name favorable storage rates. We will be in a position to handle cars promptly, both in and out.

HALEY-NEELEY COMPANY, Sioux Falls, S.D.

Go East This Summer via Northern Pacific Low Round Trip Fares

Enjoy every moment of the circle tours via this line. Get additional scenery and service at no additional expense. Through daily trains from Pacific Northwest to St. Paul, Minneapolis, Chicago, Kansas City-St. Louis with the best dining car service in the world.

Enroute stop at

Yellowstone National Park

Enter through Gardiner Gateway—original, scenic and only Northern entrance. Spend a week or month in America's greatest wonderland. See the wild animals, geysers, colored terraces, paint pots, Grand Canyon of the Yellowstone, etc. Excellent hotels.

Write, call or phone for tickets, information and travel literature.
Let us arrange your vacation trip.

A. D. CHARLTON
Asst. Gen'l Passenger Agent
PORTLAND, ORE.

Round trip westbound summer tourist tickets on sale daily
—tell your eastern friends. Attractive Homeseekers tickets
to Montana points and return.



Oak Grove, thirteen hogs were kept on a three-acre patch of clover until such time as an adjoining tract of field peas became ripe enough to be fed off. Both crops were in an orchard near bearing age. The thirteen hogs placed in this experiment weighed on an average of 73.5 pounds. They were pastured on clover without supplementary feed for thirty-two days. During this time they made an individual average gain of 18.5 pounds, or .57 pounds per day. In the succeeding thirty days they were fed rolled barley at the rate of one-half pound per hog daily. During this period the average gain was .44 pounds per hog. Owing to the fact that the animals made smaller gains during this period than the former period the relation of greater succulency during the early season's growth to quick and economical gains is obvious. This is important. In the fifty-eight succeeding days the animals ran on clover and pastured off the peas in the adjoining field. During this period they made an individual gain of .77 pounds per day. Thus the total gain per animal over a period of 127 days was 77.2 pounds, or .64 pounds per day. It is also worthy of note that 20 head of very small pigs also pastured with them during the entire time on clover. The exact amount of feed consumed, therefore, was not determined. However, the gain of .64 pounds daily per hog was very good considering the amount of grain fed, and indicates that there is profit in hogs in a normal season.

Wanted to Hear

from owner of good ranch for sale.
State cash price and description.

D. F. BUSH,
Minneapolis Minnesota

Box Nailing Machines

1 No. 5 Morgan, \$210

1 No. 8 Morgan, \$275

NORTHWEST LEAD & MACHINERY CO.
311 Front Street, Portland, Oregon

Elderly Men. Your Opportunity.

Many elderly as well as young men are making good money selling our hardy, guaranteed ornamentals, roses, fruit trees, berries, vines, etc.

The prestige of the Washington Nursery Co.—thirteen years in business—handling twelve to fifteen thousand orders annually—insures a hearing wherever you go.

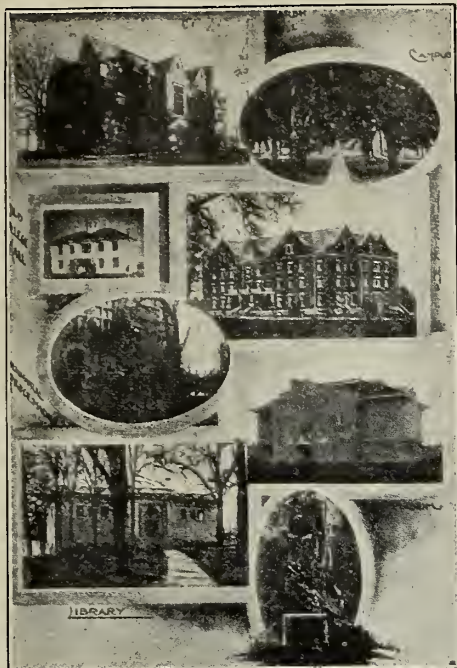
Our field reaches from Montana to Southern California and from New Mexico to Northern British Columbia.

Cash Weekly. Outfit free, experience unnecessary. **We train you free** in salesmanship, landscaping, etc. Best selling season for years. Good business in your own locality. Work all or part time.

WRITE TODAY. If not interested perhaps you know some energetic, intelligent man now unemployed.

Washington Nursery Company
Toppenish, Washington

Largest between the Rockies and Cascades.



Pacific University, Forest Grove, Ore.

PACIFIC UNIVERSITY

A "STANDARD" COLLEGE

FOREST GROVE, OREGON

Twenty-five miles west of Portland.
Beautiful Campus.
Fine Modern Buildings.
Reached by 36 trains daily.
Equipment and Endowment worth \$500,000.

Highly Trained Teachers.
Noted Conservatory of Music.
Growing Student Body.
Strong Student Organizations with "College Spirit."
Christian Influences.
Special help for self-supporting students.

Write for Free Illustrated
Bulletins to

PRES. C. J. BUSHNELL
FOREST GROVE, OREGON

It is to be emphasized that if quick and economical gains are to be made pastures must be succulent. This means getting the animals on the pasture early while this condition still obtains. This condition may be maintained for a long period if sufficient moisture is available and the field or pasture is given alternate periods of rest. This may be conveniently arranged by having two or three inclosures. These fields are then used alternately, the hogs remaining in each about a week or ten days. In the case of clover or alfalfa the growth is

allowed to become three or four inches high before the hogs are turned in to eat quickly. When the pasture consists of such crops as rape, kale and vetch, which will not stand such close grazing, the growth is permitted to reach a height of 8 to 10 inches before the animals are turned in. Changing the hogs from field to field gives the pasture a period of rest, during which the plants recuperate and grow rapidly. When the stock is returned to the field the forage is clean, tender, palatable and large quantities are consumed. Owing to the rapid growth made while at rest, a pasture that is subdivided and the areas grazed alternately is capable of carrying a much larger number of hogs per acre, other conditions being equal, than one that is continuously pastured. Hogs are inclined to root when the surface of the ground is wet or damp. For this reason the pasture, if under irrigation, is irrigated just after the hogs are changed from one pasture to another. This gives the surface of the ground time to dry before the forage is large enough to be grazed.

When conditions permit a grain crop may be desirable. This is especially true where there is a superabundance of moisture and the trees are making too much growth. Such a pasture is very desirable when the hogs are nearing the limit of growing period and the fattening period is begun. Such crops as wheat (soft club type), field peas and barley are splendid. These recommendations with reference to grain must be accepted cautiously, as conditions usually are not adapted in the orchard for crops of this kind. With legumes, however, the limitations are much less. An objection to the use of these animals usually is that they damage the trees and root up the ground. One method of avoiding this has already been suggested. Again, in such

cases this is due to having a poor grade of animals, consequently poor feeders are having a poor crop on which to feed. In either case, and especially where combined chances for success are small, a high-grade animal must be used and succulent feed provided if results are to be secured. After the fruit crop is beginning to mature it is advisable to remove the animals to another field, as it is at such times their tree-climbing and acrobatic tendencies receive the greatest stimulus. This is especially so with low-headed varieties such as Jonathan.

In closing the writer wishes to remind that observations in the valley are still in the preliminary state, and that tests will have to be made over a wide field and under varying conditions before even general recommendations may be made.

Miss Catlin's Resident and Day School for Girls

To occupy its new building this fall. Ample ground for athletic uses and a special provision for boarding students are attractive features of the new development.

Girls prepared for Eastern as well as Western colleges and schools under a faculty of experienced Eastern teachers.

Courses in Art, Music and Dramatic Art offered.

All departments from the Montessori for little children through college preparatory and special courses for older girls provided.

Numbers in the classes are kept small to allow careful supervision of each student's work.

Catalogue sent upon request to

161 Twenty-Third Street, PORTLAND, OREGON

Uniting Learning and Labor THE OREGON AGRICULTURAL COLLEGE

In its Six Schools and Forty-eight Departments is engaged in the great work of uniting Learning and Labor.

Forty-eighth School Year Opens

SEPTEMBER 18, 1916.

Degree Courses requiring a four-year high school preparation, are offered in the following:

AGRICULTURE, 16 Departments; COMMERCE, 4 Departments; ENGINEERING, 6 Departments; MINES, 3 Departments; FORESTRY, 2 Departments; HOME ECONOMICS, 4 Departments; and PHARMACY.

Vocational Courses requiring an Eighth Grade preparation for entrance are offered in Agriculture, Dairying, Commerce, Forestry, Home Makers, and Mechanic Arts. Pharmacy with a two-year high school entrance requirement.

SCHOOL OF MUSIC.—Piano, String, Band and Voice Culture.

Catalogue and beautiful illustrated booklet free.

Address THE REGISTRAR,
1 w-7-15-16 to 9-7-16) CORVALLIS, OREGON

FRANQUETTES AND MAYETTES GRAFTED

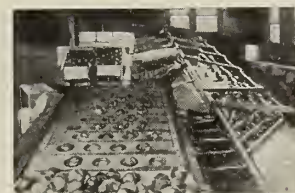
Splendid stock of the above. Large trees, best and purest strain. Prices on application.

TABLE GROVE NURSERIES, Healdsburg, Cal.

"Francis Type"

Fruit Grading Machines

and Picking Bags



Write for Information

**Western Fruit Grader and
Mfg. Company**

Grand Junction, Colorado

BETTER FRUIT

HOOD RIVER, OREGON

Official Organ of The Northwest Fruit Growers' Association
A Monthly Illustrated Magazine Published in the
Interest of Modern Fruit Growing and Marketing
All Communications Should Be Addressed and Remittances
Made Payable to

Better Fruit Publishing Company

E. H. SHEPARD, Editor and Publisher

STATE ASSOCIATE EDITORS

OREGON

C. I. Lewis, Horticulturist.....Corvallis

WASHINGTON

Dr. A. L. Melander, Entomologist.....Pullman

O. M. Morris, Horticulturist.....Pullman

W. S. Thornber, Horticulturist.....Pullman

COLORADO

C. P. Gillette, Director and Entomologist.....Fort Collins

E. B. House, Chief of Department of Civil and Irrigation
Engineering, State Agricultural College.....Fort Collins

E. P. Taylor, Horticulturist.....Grand Junction

UTAH

Dr. E. D. Ball, Director and Entomologist.....Logan

MONTANA

O. B. Whipple, Horticulturist.....Bozeman

CALIFORNIA

C. W. Woodworth, Entomologist.....Berkeley

W. H. Volck, Entomologist.....Watsonville

Leon D. Batchelor, Horticulturist.....Riverside

INDIANA

H. S. Jackson, Pathologist.....Lafayette

BRITISH COLUMBIA

R. M. Winslow, Provincial Horticulturist.....Victoria

SUBSCRIPTION PRICE:

In the United States, \$1.00 per year in advance

Canada and foreign, including postage, \$1.50

ADVERTISING RATES ON APPLICATION

Entered as second-class matter December 27, 1906, at the

Postoffice at Hood River, Oregon, under Act

of Congress of March 3, 1879.

The Fruit Marketing Agency.—Capt. Paul Weyrauch reports that 75 per cent of the tonnage of the Northwest has joined the Agency, which assures a successful organization. The Bureau of Markets, connected with the Department of Agriculture, has worked very strenuously and is to be congratulated on having given the Agency a successful start. It is reported that the government has spent \$10,000 in assisting to create this Agency. The cost to the growers, according to the budget, will be \$8500 for the first year, or not to exceed a maximum of \$1.00 per car. It is to be regretted, but nevertheless it is a fact, that growers have not been sufficiently informed in reference to the purpose of the Agency. No one is to blame for this. However, it is a fact that the local newspapers in the various fruit sections, as well as the big dailies, have not given sufficient publicity to the movement. It is impossible for the few government officials, in the limited time, to meet all of the growers and explain fully to them, although meetings were arranged for such purpose in various sections, but many of these notices did not have sufficient publicity and therefore the attendance was not such as it should be. The Uniform Contract and the By-Laws have been extensively published; these have been published in "Better Fruit," as well as in a number of other publications. Just a few words about the Fruit Growers' Agency seem in order now that the growers may understand briefly its purpose. The Agency is created for the purpose of assisting the fruitgrowers in the Northwest. One of the purposes will be to obtain and furnish the selling organizations with valuable estimates about the crops in all of the districts, to enable the selling organizations to better determine values. The Agency will receive and disseminate information to its members from the


Bureau of Markets, as to marketing conditions in all of the principal cities. This report will state the number of cars arriving daily, the number of cars on storage, and also state prices at which fruit is selling at the time of the report. The Agency will use its tonnage and influence to improve transportation facilities wherever possible. The Agency will aim to disseminate information that will prevent selling concerns from piling fruit into already glutted markets and also endeavor to give information in reference to markets not properly supplied, the opportunities for supplying them and the possible prices that may be obtained. In other words, the Agency will assist in giving information which will create a more intelligent and general distribution and better prices. All of this information will be of great value to the trustees and salesmen of the different organizations affiliated with the Exchange in determining actual sales values of different varieties of fruits and apples, which in itself ought to be a big factor in preventing unnecessary cutting of prices and unnecessary competition which has existed in the past. This partially covers the field of activities for the Fruit Growers' Agency for the coming season. Growers must not be unreasonable in their expectations and should bear in mind that in the first year the Agency can only reasonably be expected to make a fair start. One thing which many growers fail to understand is this fact. The Fruit Growers' Agency will not sell a box of apples for any selling concern or any individual grower. They will make no prices and in no way endeavor to arbitrarily fix the price of any kind of fruit or any variety. It is up to each selling organization to do this for itself just the same now as it has been in the past, but the Fruit Growers' Agency will be a big factor in helping them to do it more intelligently in the future.

1916 Apple Prices.—The June estimate of the government indicates 6 per cent less apples than the actual amount grown in 1915. It is to be borne in mind that many things may happen, and they usually do, between now and harvesting season to reduce the quantity estimated as early as June. It must be admitted, however, that occasionally the final harvesting is greater than the early estimates. So far, there is not a single apple-producing district in the United States that is reported heavy. Many are reported light. In 1914 the United States produced a bumper crop of 84,000,000 barrels. In 1915 the actual crop grown was estimated by the government at 76,000,000 barrels, or only 10 per cent less than in 1914, making two bumper crops in succession, which lessens the possibility of a third bumper crop in 1916. It seems reasonable at the present time to assume that the crop of the United States will be a moderate-sized crop, neither a heavy crop or a light crop. Business conditions have improved in many sections of the United States and there is every assurance to assume that the United States is on the eve of prosperity which

will continue for many years. Therefore at the present time the situation is such that there is good reason to believe that apples will sell for a fair price this year and pay the grower a satisfactory profit on his investment and for his work.

Hogs and Sheep in the Orchard.—Fruit districts where diversity farming has been more or less of a factor in connection with orcharding are a standing testimonial to the value of diversity in connection with the orchard business. It is a fact that where any district is engaged in or has gone into diversity in connection with orchard business, the district and the business condition of that district in a financial way is much better than in the fruit districts which have depended entirely upon fruit. There is nothing like a reasonable amount of diversity to help a fruitgrower out in the years when prices are low or in the years when the crop is light. Hogs and sheep

**WATER LEVEL
GRADE THRU
THE CASCADES**



**SPokane
Portland
Seattle**

**NORTH BANK
ROAD**

EASTWARD

By way of Spokane,
the Inland Empire and the
Yellowstone or Glacier National
Park Routes

Round Trips by Direct Lines

St. Paul	\$ 60.00
Chicago	72.50
New York	110.70
Des Moines	66.85
St. Louis	71.20
Denver	55.00

Proportionate fares to other places.
Slightly higher going or returning
through California.

The ships of de luxe service, "North-
ern Pacific" and "Great Northern" for
San Francisco every **Tuesday, Thurs-
day, Saturday**. Fares include meals
and berths and extras without extra
fare.

Are You Going Away this Summer?

CLATSOP BEACH

IS THE PLACE.

Send for booklet.

R. H. CROZIER, Ass't Gen. Pass. Agent
Ticket Office, 5th and Stark Sts.
Portland, Oregon

have proved very profitable. Consequently it seems advisable to suggest to the fruitgrower who is dependent upon fruit alone that an article in this issue on the subject of "Hogs and Sheep in the Orchard" is well worth his attention.

The Apple Crop of 1916.—At the present time reports from all sections indicate that this year's crop will be the cleanest crop of apples produced for many years. Fungus is absolutely under control in the sections where it has been prevalent in the past. Growers have sprayed carefully and thoroughly for codling moth, and up to the present time no damage is reported. The greatest damage usually occurs in the month of August and September, but it is safe to say in advance that the work will be so carefully and thoroughly done this year that the loss from codling moth will be reduced to the minimum in almost all of the districts of the Northwest.

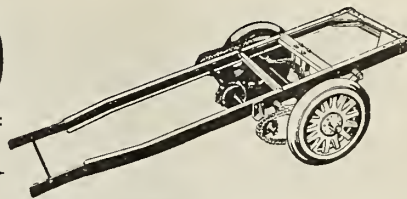
Inoculation for Cover Crops.—A number of growers who have sown clover and alfalfa in orchards and soils, particularly where clover and alfalfa had not been previously grown, have found that by inoculating the seed they can produce a splendid stand where otherwise failure would generally occur. Inoculation has been worked out scientifically by the Experiment Stations and bacteria are being prepared by a number of manufacturers in a commercial way for general use. Inoculation is a matter which every grower should investigate who expects to sow cover crops this fall or next spring.

International Apple Shippers' Association will hold their annual convention in New York City August 15, 16, 17 and 18, at the Astor Hotel. This convention is most important to apple growers of any convention that is held anywhere in the United States by any organization. It is an opportunity that no apple grower or, particularly, any apple salesman, should miss, if it is possible for him to attend.

Thinning Apples.—While the crop of apples is not heavy this year, it must be borne in mind that a perfect crop in size as well as cleanliness is a big factor in price. While the trees are not loaded, nevertheless it is a fact that intelligent thinning will be necessary this season. If it has not yet been done it should be done promptly.

\$350.00

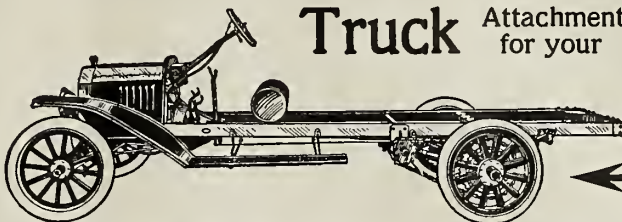
BUYS THIS →



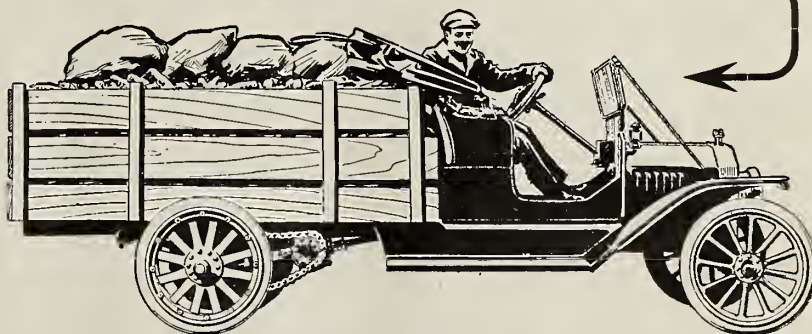
Truck Attachment for your Ford

making a one-ton Truck

← Like This



You can easily equip it with a body Like This



You can equip with any style bed to suit your needs

Car Load Just In—Order Today

Mitchell
LEWIS & STAYER CO

East First and
East Morrison Sts.
Portland, Oregon

J. & H. GOODWIN, Ltd. Apple Importers

Commercial Sales Room, Deansgate, Manchester, England
Floral Street, Covent Garden Market, London, England
Fruit Exchange, Victoria Street, Liverpool, England
Humber Dock Street, Hull, England

AMERICAN ADDRESSES:

97 Warren Street, New York, N. Y. 60 State Street, Boston, Massachusetts

Consignments and Correspondence Solicited

PORTLAND, OREGON

Portland Hotel

The hotel which made Portland, Oregon, famous
Most Desirably Located. In the Center of Shopping and Theatre District
Covers a City Block.

Broadway, Sixth, Morrison and Yamhill Streets
European Plan—\$1.00 per day and upward

Write for Portland Hotel Booklet.

GEO. C. OBER, Manager

My Magazine

FREE For Six Months

INVESTING FOR PROFIT

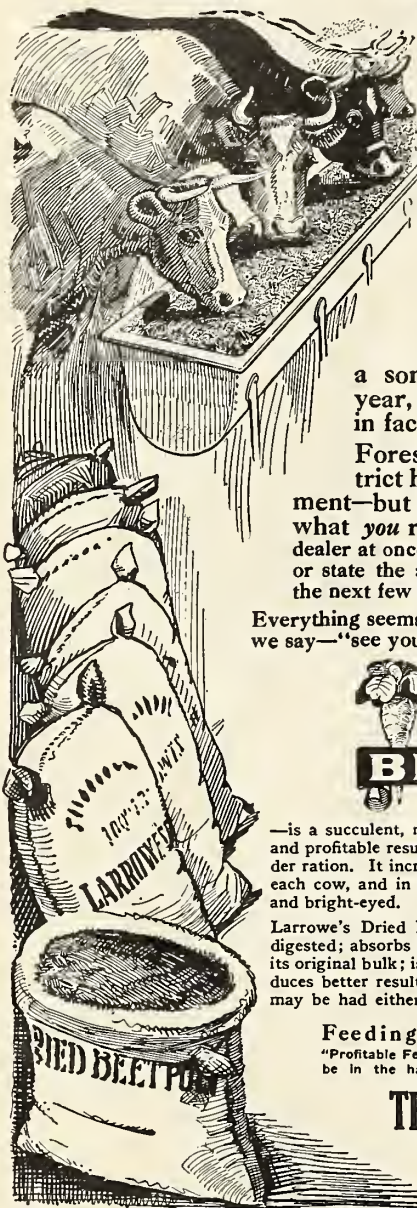
Send me your name and address right NOW and I will send you INVESTING FOR PROFIT magazine absolutely free for six months. It tells how to get the utmost earnings from your money—how to tell good investments—how to pick the most profitable of sound investments. It reveals how capitalists make \$1,000 grow to \$22,000—in fact gives you the vital investing information that should enable you to make your money grow proportionately. I have decided this month to give 500 six-months subscriptions to INVESTING FOR PROFIT free. Every copy is

WORTH AT LEAST \$10.00

to every investor—perhaps a fortune. Send your name and address now, mention this paper and get a free introductory subscription. Conditions may prevent repeating this offer. Better take it now. You'll be willing to pay 10c a copy after you have read it six months. H. L. Barber, Pub., 533-30 W. Jackson Blvd., Chicago

DAIRYMEN !!

MAKE RESERVATIONS NOW



For This Season's
Supply of

DRIED BEET PULP

The beet sugar factories will soon begin the slicing of this season's beet crop—and that means a new supply of Larrowe's Dried Beet Pulp. While we will have a somewhat larger supply than last year, yet the demand is also larger—in fact, has increased enormously.

Foresighted dealers in nearly every district have already placed orders for shipment—but if you wish to make sure of getting what you require it will be well to see your dealer at once and give him an order for early delivery or state the amount you think you will need during the next few months.

Everything seems to favor the man who is prepared, so we say—"see your dealer now."



—is a succulent, milk-producing, vegetable feed that gives certain and profitable results. Combine it with alfalfa and it makes a wonder ration. It increases the milk flow from 1 to 5 lbs. per day from each cow, and in addition keeps your cattle healthy, sleek-coated and bright-eyed.

Larrowe's Dried Beet Pulp is light, bulky, succulent and easily digested; absorbs water very quickly and swells to about six times its original bulk; is cheaper than bran and other mill feeds, yet produces better results. It is put up in convenient 100-lb. sacks, and may be had either plain or with molasses. Ask for "Larrowe's."

Feeding Booklet Free—Write for it!

"Profitable Feeding" contains valuable information that should be in the hands of every feeder. Sent free on request.

THE LARROWE MILLING CO.

944 Central Building
LOS ANGELES, CALIFORNIA

Thinning Apples

By F. G. Carlisle, Kettle Falls, Washington

WE have heard a great deal said about spraying, pruning, cultivating and fertilizing, but very little about thinning, which I consider the most important phase of orchard work. If we fail to thin and to do it intelligently, we cannot hope to make a success of growing fancy apples, all of the operation mentioned are so dependent on each other, that if we neglect either of them, we fall down on the whole proposition. If we hope to grow a high percentage of extra fancy fruit, it is absolutely necessary that we thin the fruit and thin it intelligently. One reason why we should thin our fruit is that in the Northwest, under

normal conditions, the trees will usually set more fruit than they have strength to grow to proper maturity, and if we do not thin the fruit will be small and inferior.

It is not an easy matter to say off-hand just how to thin, as each tree may require different treatment, or I may say each branch of the tree. However, I would say thin to the center apple of the cluster, cutting off all the apples on the side of the cluster, unless we find that the center apple has been injured by frost or in some other way. In that case we should select one of the apples of the side of the cluster, cutting off all the others. The reason for thinning

to the center apple is that it is the first one of the cluster to blossom, and has several days' start of the others and will make the largest apple of the cluster. The large apples are the ones that usually mature first and command the top price, and that is what we are all looking for.

I would endeavor to have all the apples of red varieties on the upper side of the limb. Probably nine-tenths of the apples point upward at blossoming time, or while the apple is small, one cheek of the apple is toward the south and it will start to color while it is small; as the apple grows its own weight pulls it down so that the other cheek will be exposed to the sunlight. This insures high coloring and a large percentage of Extra Fancy apples. In no case leave an apple on the under side of the limb of red varieties.

As I have said before, it is difficult to lay down hard and fixed rules for thinning apples. We must use good common sense and thin according to the strength of the limb. With Jonathan and Winesap, in no case would I leave the apples closer than 8 to 10 inches apart. I would not leave an apple on new wood, that is, wood that grew last year. The blossoms on new

U. S. Gov. experts report that oils correctly refined from asphalt-base crude "distill without decomposition" (do not break up and lose their lubricating value under cylinder heat) and "are much better adapted to motor cylinders, as far as their carbon-forming proclivities are concerned, than are paraffine-base Pennsylvania oils."

Motorists who use Zerolene, an oil scientifically refined from asphalt-base crude, back up the experts with reports such as these: "Covered over 16,000 miles without adjusting valves or cleaning out carbon."—"The carbon taken out of this car in 50,000 miles amounted to less than an ounce." Zerolene is for sale at dealers everywhere and at service stations and agencies of the Standard Oil Company

ZEROLENE

the Standard Oil for Motor Cars

wood appear eight or ten days later than on the old wood, thus giving the fruit on the old wood an advantage from the start. It is on the last year's wood that you get the small, poorly colored and immatured apples. Never leave two apples so they will touch. The point of contact will prevent coloring and offers a harboring place for insects.

The trees should be gone over again in the middle of the summer, and all misshapen, limb-rubbed and marked apples should be taken off and allow the strength to go into the remaining apples on the tree. These apples are "C" grade at that time and will never be any higher grade. We will get more "C" grade apples than we should have anyhow. The Jonathan, Wagener and Winesap should be thinned as soon after the fruit sets as possible. The earlier that we can thin them the larger the fruit will be. I have done this for several years and never have had the June drop, unless they had been injured by late frost. However, with the Spitz and Rome Beauty I find this a useless expense, for I find that with me they will have the June drop anyway. I find that very few of us have sufficient nerve to thin enough.

I will never forget the advise of the venerable C. L. Smith, given at the first farm institute that I attended in this state, in which he said: "Thin until you think that you have enough off, then go over the trees again and take off one-half of the remainder." I have found this to be splendid advice, especially on older trees. Of course the older trees will require more severe thinning than young trees. If we thin early and thin severely we will grow larger fruit, and it will also have a tendency to make the trees bear a fair crop of fruit each year. I would also advise thinning as an aid to spraying in this district where the apple scab is one of the problems that we have to contend with. It is utterly impossible to coat the fruit with the spray if two apples touch each other. I hear a great many men complain of the expense of thinning. I would like to say that it does not cost as much to thin the excess off and let it drop to the ground in the spring as it would to pick it off in the fall and place it in a picking bag and then go to the expense of sorting them out.

From the best authority that we have, the production of apples in the Northwest is sure to increase very rapidly, and if we hope to reap the full measure of success we must grow a high percentage of Extra Fancy fruit. The low-grade fruit will not stand the freight and will injure the sale of the better grades. We are too far from the large centers of consumption to hope to market anything but the very best grades

Sebastopol Gravensteins

The crop of famous Sebastopol Gravenstein Apples is now moving. Season closes August 26th. The best apples from over 200 of our best orchards. Community packing houses insure uniform pack.

See our representative or wire us.

Sebastopol Apple Growers' Union

SEBASTOPOL, CALIFORNIA

Yellowstone—The National Paradise for Animal Life and Animal Lovers

FRANKLIN K. LANE

Secretary of the Interior

closes a delightful booklet on Yellowstone Park thus:

"Yellowstone National Park is ideal for camping out. When people realize this it should quickly become the most lived in of all our national parks. Remember that the Yellowstone is yours."

This booklet has been reprinted for distribution by the

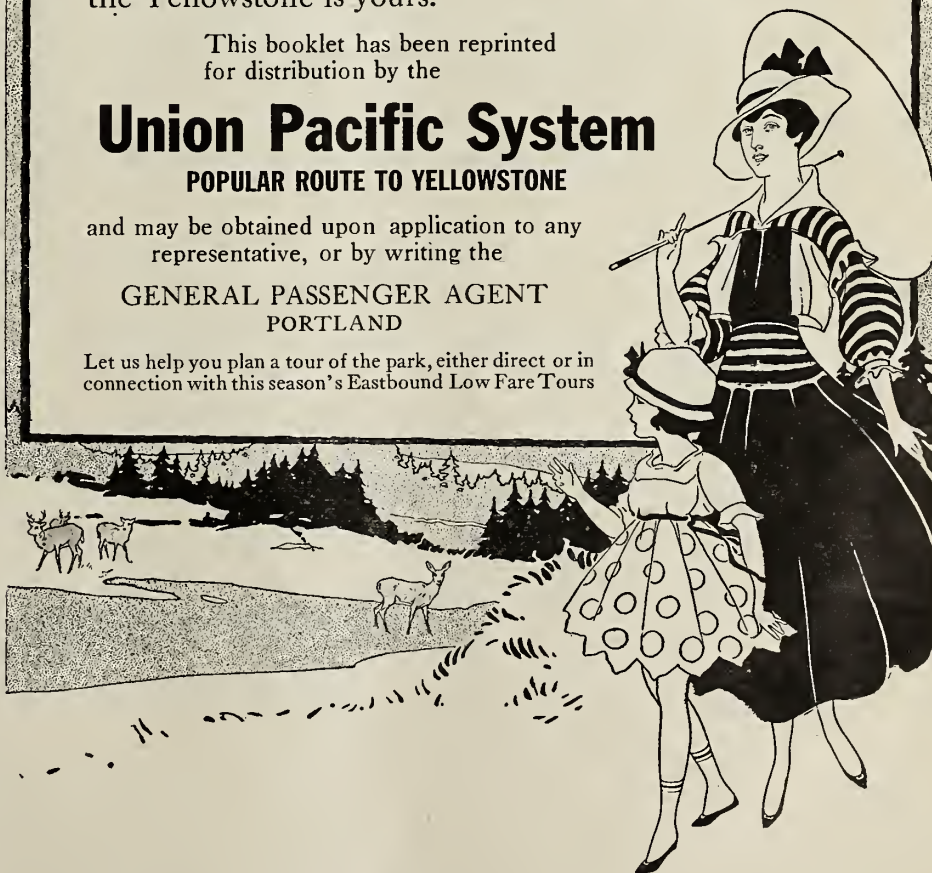
Union Pacific System

POPULAR ROUTE TO YELLOWSTONE

and may be obtained upon application to any representative, or by writing the

GENERAL PASSENGER AGENT
PORTLAND

Let us help you plan a tour of the park, either direct or in connection with this season's Eastbound Low Fare Tours



Wanted

Position as foreman or superintendent on a fruit or general farm by young married man; agricultural college graduate; experienced on both fruit and dairy farms. Strictly temperate; good references.

Address R. W. M.,
2219 H. Street Bellingham, Washington



LADD & TILTON BANK

ESTABLISHED 1859
Portland, Oregon

Comparatively Speaking

The checking account is as important a factor in the systematic management of household affairs as it is in the well-organized business. Paying by check is the advantageous, polite way. It reflects one's ability to do things. Indicate your estimation of all this by paying by check. It will be to your convenience, satisfaction and profit. This strong bank, oldest in the Northwest, respectfully invites your checking and savings accounts.

NEWPORT

Reduced Fares for Summer Trips

When summer comes and a vacation outing is planned, remember Newport is cool. The breeze from off the mighty Pacific never fails. With the many diversions and attractions to pass the hours away, surely you could find no better place for your vacation.

The Cost is Low Round Trip Tickets are on sale daily from all Southern Pacific stations in Western Oregon. The return limit is October 31.

Two Daily Trains from Albany and Corvallis make excellent connections

Write for illustrated booklet "Newport" or ask local agent for complete information.

John M. Scott, General Passenger Agent, Portland, Oregon

SOUTHERN PACIFIC

F. W. BALTES AND COMPANY

Printers • Binders



Unexcelled facilities for the production of Catalogues, Booklets, Stationery, Posters and Advertising Matter. Write us for prices and specifications. Out-of-town orders executed promptly and accurately. We print BETTER FRUIT.

CORNER FIRST AND OAK STREETS
PORTLAND, OREGON

of fruit, and the sooner we realize this and stop growing inferior fruit the more profitable it will be to all. In order to compete with other sections growing the same varieties of fruit as are grown in this district, we must use every available means to get the size and color earlier in the season than we have been doing, and this can only be done by thinning early and severely and by summer pruning.

Fruit-Market Agency Will Improve Service

"The new fruit-marketing agency developed by the United States Department of Agriculture will give the Northwest fruitgrowers such a service for marketing their products as they have never had before," said Professor C. I. Lewis upon his return from a conference with Captain Paul Weyrauch, president of the Fruit Growers' Agency, Inc., C. T. More of the Office of Markets and Rural Organization of the United States Department of Agriculture, and G. A. Nahstal of the Federal Bureau with headquarters at North Yakima. Professor Lewis, representing the Oregon Agricultural College Extension Service, was called into conference with these marketing specialists to consider the best means of putting into effect the uniform contract marketing plan and to devise the best methods of physical handling so that the fruit products will meet the standardization requirements. The conference agreed to recommend activities by members of the fruit marketing agency along four distinct lines, as follows:

Securing and distributing accurate reports of crop conditions; securing a uniform system of harvesting; improve the storage and packing service, and secure standardization of account-sales system. "Heretofore," says Professor Lewis, "no exact or complete information has been obtainable of the amount and conditions of horticultural crops. Growers and distributors of the Northwest have been compelled to rely upon guesses for this information and consequently have made many mistakes. Other and larger agencies in other parts of the country have been able to get a good deal more complete and exact information than the local men, and they have capitalized the mistakes of the Northwest growers and handlers. It is hoped that we can now develop a system of collecting and reporting the exact conditions, thus giving us a tremendous advantage that we have not before enjoyed. The uniform harvesting system should supply large quantities of fruit of like kind and like degree of maturity. Too often in the past the fruit has dribbled in in small quantities, too small to attract the attention of large dealers, and it has been of varying degrees of maturity, some over-green, some just right and some overripe. These conditions must be improved if the best markets are to be accessible. This is a critical time for the horticultural industries of the Northwest and a great deal of the future success of the industry depends

upon the present improvement of packing and storage service. The Fruit Growers' Agency will make a systematic study of the relative merits of the packs of the small individual growers and of the community packs. By community pack we mean the pack put up by a number of growers, three or more acting together. Packs put up in this way will of necessity be more nearly uniform than those put up by individuals acting independently. The system will permit a specialization in the division of labor or the employment of more expert assistants in the work of packing and will increase the rapidity of handling. Another big advantage of the co-operative plan is the economy. Now look here. Suppose five men invest two thousand dollars each in a packing house and packing equipment for handling their own individual fruit. Suppose five other men go together and erect one packing house and buy one set of equipment. The cost to the five growers under the former plan is \$10,000. To the five growers under the second plan it is \$2,000. Of course the larger growers may own their own individual warehouse and packing equipment, but it is a charge on the industries that the business of the small grower will not stand. The adoption of a uniform sales-account system will enable the investigator to see at a glance the condition of the business. Heretofore, the radically different systems of recording the account sales made it difficult, if not impossible, to arrive at an understanding of the condition. This information is necessary to the success of uniform marketing plans and it is hoped that the uniform account-sales plan will be accepted by a large majority of growers and distributors. A careful study will be made of the fruit from the time it leaves the tree until it reaches the consumer, and every effort will be made to fit properly to go into the best and most profitable market."

Zillah, Washington, has a cold-storage plant with a capacity of 600 cars.

Walla Walla, Washington, reports very little damage from the frost.

Nice Bright Western Pine **FRUIT BOXES** AND CRATES

Good standard grades. Well made. Quick shipments.
Carloads or less. Get our prices.

Western Pine Box Sales Co.
SPOKANE, WASH.

YOUR SEED DEALER RECOMMENDS
THE STANDARD INOCULATION

FARMOGERM

He knows it Means Crop Insurance for **Alfalfa, Vetch, Clover**, and all other legumes. Bigger and richer crops for less money and labor.

Ask him about it or write to us. Dept. 127 for
"The Legume Grower" FREE

EARP-THOMAS FARMOGERM CO.
BLOOMFIELD, N. J.

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

Washington State Fair

SEPTEMBER 18-23, 1916

Liberal premiums offered for Horticultural and other exhibits.
Attractions of all kinds.

Ferullo's Band, of Chicago, will play two concerts daily.
Reduced rates on all lines.

Send for Premium List

FRANK MEREDITH, Secretary, North Yakima

The Prospects for Wormy Apples

[Experiment Station, Pullman, Washington]

THE season 1915 was generally considered a "worm year." Because of a concurrence of several factors more apples than usual were wormy at harvest and correspondingly more worms than usual went into winter quarters. Ordinarily the winter mortality of the codling moth is excessive, as is obviously apparent when we consider how few apples become wormy early in the season year after year. The past winter, however, although severe, did not manifest the alternate freezing and thawing which is most fatal to the codling moth. In many localities a snow blanket held over into spring to protect the worms in the ground. Accordingly the codling moth has been transforming in numbers, and in the warmer valleys the first brood of worms is showing up to a startling extent. First-brood worms should be destroyed by every means possible, declares Dr. A. L. Melander, Entomologist of the Washington Experiment Station. A codling moth produces forty some eggs and as in many districts a partial third generation exists which is at least as numerous as the second generation, every worm destroyed early in the season carries with it the destruction of dozens of others.

Owing to the habit of the majority of codling worms to enter the fruit through the calyx cavity the importance of proper calyx spraying immediately after blossoming cannot be overstated. This spraying is effective for the last worms of the season as well as for the first, but does not help much in destroying the minority of worms which seek to enter apples through the sides. The relatively few worms which have this habit must be reached by a series of cover sprayings, but because of a peculiar instinct of the newly-hatched worms cover sprays are never 100 per cent effective. When a worm bites into the apple skin it rejects, without swallowing, the tough epidermis. Only accidentally then does it swallow any poison, for its mouth becomes pretty well cleaned by the rejected bitings. Owing to this habit many worms can work through even the most complete of cover coatings. It seems, furthermore, practically impossible to coat every portion of every apple, so that many worms gain free entrance into the fruit. It is such escaping worms

which cause destruction by multiplying into a second and a third brood.

A cover spraying is considered effective for three or four weeks. If the first cover spraying was timed too early so that after weeks many worms are still entering the fruit, another application should be given, but if it was properly timed it is unnecessary to repeat this spraying. The exact strength of the spray is not so important as the time and the method of application. Five pounds of paste arsenate of lead to two hundred gallons will answer as well as double that quantity. The cover sprayings may be supplemented by banding, in which case the bands should be cleaned every two weeks. But by all means thin for wormy fruit, and destroy the picked-off fruit. If the potentialities of neglected first-brood worms were realized the rancher could well afford to give a premium for wormy fruit when thinning.

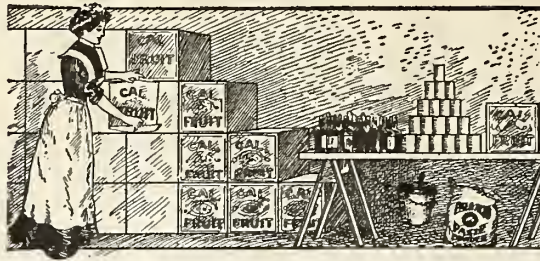
Except for a few abnormal precocious worms the onset of the first-brood worms this year dated June 5 at Kennewick, June 10 at North Yakima and June 15 at Wenatchee. For one month following these dates the first brood of worms is hatching, after which a lull of a couple of weeks can be expected before the beginning of the second brood. Preceding this lull it is useless to spray. The date for the second-brood spraying can be easily determined by trapping the earliest first-brood worms as they emerge from the fruit, as, for example, by a strip of burlap tied around the tree trunks. Allowing two weeks for the cocoon stage and two weeks more for the eggs to be produced and hatched and the date for the summer spraying is known. Summer spraying should be repeated at intervals of one month to provide for stretching of the fruit and rubbing off of the spray.

Colorado reported a temperature as low as 19 in some sections of the Grand Valley, causing severe losses. It is stated, however, that where growers smudged extensively that very satisfactory results were obtained.

The first box of cherries shipped by F. B. McKevitt & Co., California, sold in Chicago for \$100.



PASTE



GUM



PICK UP GUM, for use on Knapp labeling machines (very adhesive)
CEMENT, for use on Burt labeling machines. **LABELING GUM**, for use on all bottle labeling machines.
CELLULOID TIN LABELING PASTE, a RUST proof tin labeling paste.
TRANSPARENT PASTE, for bottle or jar labeling.

PALO ALTO PASTE POWDER—three pounds added to cold water makes two gallons fine white paste for all labeling work, or a RIBBON paste for labeling machines. Extensively used by canners and fruit packers.

Robinson Chemical Works

Manufacturers of Paste and Adhesives for All Purposes
 Office: 351 Eighth Street, San Francisco

By-Laws Fruit Growers' Agency, Incorporated

(Continued from last issue.)

Article VII.—Meeting of the Membership

Sec. 1. The annual meeting of this corporation shall be held upon the second Monday of April in each year, in the City of Spokane, Washington.

Sec. 2. Special meetings of the members of the corporation may be called

by the President in his discretion, to be held at such time and place within the four Northwestern States, as he may name. Special meetings must be called by the President upon petition of not less than twenty-five (25) per cent of the membership of the corporation. The persons requesting a special meeting shall signify in their request the business which they desire to have considered at the proposed meeting. At least five days before holding of any regular or special meeting the Executive Secretary shall mail to each member of the corporation a written notice stating the time and place of holding the meeting, and giving proper notice of the business to be brought up at such meeting for action.

Sec. 3. Any member, in case of sickness or unavoidable absence, may, by written proxy, delegate to any active member authority to represent him or it at any meeting. The vote of such proxy shall be binding on the individual, firm or corporation he represents.

Sec. 4. A majority of the members represented in person or by proxy shall constitute a quorum at all meetings. In the transaction of business the majority vote of those present or represented by proxy shall decide, except as in these by-laws otherwise provided. Each member, whether an individual, partnership, association or corporation, shall have but one vote, regardless of the number of members, stockholders or officers of such partnership, association or corporation who may be present. Provided, however, that if called for, there shall be a tonnage vote, such tonnage vote to be based upon the actual tonnage handled by each member in the preceding year, it being further provided that only such tonnage shall be voted as may be involved in the issue to be voted upon. A tonnage vote shall be one vote for each car shipped by the member voting.

If at any meeting of the members it is found that a majority of the mem-

bers are not present or represented by proxy and that it further appears that the members present in person or by proxy actually represent a majority of the total tonnage of the active membership, then a quorum shall be declared.

Sec. 5. The regular order of business at the annual meeting of the members

TRY this SPRAY PUMP at OUR EXPENSE



The simplest and most serviceable spray pump on the market. Use it in bucket, keg or barrel.
All Kinds of Spraying.
 For whitewashing barns, coops, pens, etc. For washing windows, buggies and autos. **Sells for half the price of similar pumps.**

ANTI-SUCTION
 No packing to wear out; no friction; works easy; constant pressure; carry it to your work loaded; or insert in liquid container. **Excellent for spraying trees and stock, and for all disinfecting purposes.**

Our Trial Offer Free to You
 Sent on ten days free trial. No money down. Write today for full particulars and literature. A trial will convince you that you should not be without one at our low price.
PEORIA HYDRAULIC PUMP CO.
 PEORIA, Dept. 12 ILLINOIS

GALLOWAY

ENGINES SEPARATORS, SPREADERS, TRACTORS

My 250-page free catalog tells you why I sell direct to user, at wholesale sale, these and other implements, built in my own factories at Waterloo, at prices one-third to one-half LESS than you usually pay for first-class goods. All sizes, styles and prices of separators, engines and spreaders. My Farmobile (tractor) has no equal for simplicity and efficiency. State what you need. 250,000 customers testify to quality of the Galloway line of goods. Write today for your free copy of this wonderful book of bargains for farm and household.

Engines \$34.50
Separators \$64.75 up
Spreaders \$26.75 up

WM. GALLOWAY, Pres.,
WM. GALLOWAY CO.,
 1057 Galloway Station
 Waterloo, Iowa.

\$995

Rides Like An Auto



The New Patented Harvey Bolster Springs are made just like the finest automobile springs. They absorb all the bumps, jars and jerks of rough, uneven roads, and change an ordinary wagon into an easy-riding spring wagon. A set on your wagon will enable you to get your perishable produce to market in first class condition always. **Insist on Harvey's.** If your dealer can't supply you write us for free catalog and price list.

Harvey Spring Co., 784-17th St., Racine, Wis

PROTECT YOUR STOCK!!

From the Torture of Flies



CHILD'S SO-BOS-SO
TRADE KILFLY MARK

In Sealed GALLON CANS **\$1.25**

Cows Give 1/3 More Milk — Horses Do More Work on Less Feed when Protected by SO-BOS-SO.

Applied in a few seconds at a cost of less than 1/2 cent per day per head.

If you milk more than one cow you need a "NATIONAL" Separator with the marvelous 1 piece skimming device, the "Vortespoon"—Catalog on request.

PORTLAND SEED COMPANY
 Portland Oregon



Ask for Catalog No. 206

of this corporation, and so far as feasible at special meetings, shall be as follows:

1. Reading and approval of minutes of the last meeting.
2. Reports of officers.
3. Reports of committees.
4. Unfinished business.
5. New business.
6. Adjournment.

Sec. 6. Roberts' Rules of Order shall be recognized as standard authority by this corporation in all cases not otherwise provided for.

Article VIII.—Meetings of Board of Trustees

Sec. 1. The annual meeting of the Board of Trustees shall be held immediately at the close of the annual meeting of the members in each and every year, at the place where the annual meeting of the members is held.

Sec. 2. Special meetings of the Board of Trustees may be held at any time or place in the four Northwestern States upon call of the President or on written application made to the Executive Secretary by any three members of the board. Five days' written, or two days' telegraphic notice of such meetings, shall be given by the Executive Secretary to all members of the board, and such notice shall give the time and place of meeting and the purpose or purposes for which it is called.

Sec. 3. At any such meetings the presence of a majority of the members of the board as at the time constituted, shall make a quorum, and the attendance of a quorum shall be necessary in order to transact business.

Sec. 4. The order of business at the annual meeting of the Board of Trustees, and so far as feasible at special meetings, shall be as follows:

1. Reading and approval of minutes of previous meeting.
2. Reports of officers.
3. Reports of committees.
4. (At annual meeting) Election of officers.
5. Unfinished business.
6. New business.
7. Adjournment.

Article IX.—Committees.

Sec. 1. The President shall, at or immediately following the annual meeting, appoint an advisory committee, an arbitration committee and a membership committee, and such other standing committees as he may deem advisable, subject to confirmation of the Board of Trustees.

Each of the above committees shall consist of not less than three members. The membership of any and all committees may be selected either from the trustees or from persons who are members, officers, trustees or employees of organizations holding membership in this corporation.

Article X.—Advisory Committee

An advisory committee of not less than three shall be appointed from among the active members, such appointment to be ratified by the Board of Trustees. The Secretary shall be an ex-officio member of this committee.

Ridley, Houlding & Co.

COVENT GARDEN, LONDON

Points to remember when consigning apples to the London Market

1.—We Specialize in Apples

2.—All Consignments Receive our Personal Attention

3.—The Fruit is Sold by Private Treaty

CABLE ADDRESS: BOTANIZING, LONDON



Lasts Twice
As Long

THROUGH the microscope, a spindle looks as rough as sand paper. That's where the rub comes. But the powdered mica in Mica Axle Grease fills up this unevenness, making a smoother, cooler bearing. That's why Mica does better work, and lasts twice as long. Get a can from your dealer today.

Standard Oil Company
(California)

MICA AXLE GREASE

Oregon Nursery Company

ORENCO, OREGON

Extensive growers of all lines of Fruit, Nut and Shade Trees, Evergreens, Flowering Shrubs, Vines, Roses, etc. Introducers of the VROOMAN FRANQUETTE walnut, recognized as the best walnut. Our large complete stock consists of varieties suitable for every kind of climate.

Write us about your wants before buying.



RHODES DOUBLE CUT
PRUNING SHEAR

Pat'd June 2, 1903.

RHODES MFG. CO.,

520 S. DIVISION AVE., GRAND RAPIDS, MICH.

THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders. Write for circular and prices.

TOP DRESS all your Crops with **Nitrate of Soda** alone, no matter what other fertilizers you may have used. 100 pounds to the acre for seeded, and 200 pounds to the acre for cultivated crops will do the work. The increase will yield large profits over the cost.

Write on post card for our money making books

WILLIAM S. MYERS, Director
25 Madison Avenue, New York

TARRED ORCHARD YARN

The time is now just right for tying fruit trees. Tie the interior of the tree before the leaves are out and the exterior can be tied later. Orchard Yarn is put up in 5 lb. balls, 10 balls to a sack. This form is more convenient for use as the ball can be placed in the tree and by pulling the yarn from the inside it never tangles. 2-ply contains about 100 feet per pound.

Sold by all merchants handling orchard supplies
MANUFACTURED BY

The Portland Cordage Co.
PORTLAND, OREGON

The First National Bank

HOOD RIVER, OREGON

A. D. MOE - President
E. O. BLANCHARD - Cashier

Capital and Surplus \$125,000
Assets Over \$500,000

Member Federal Reserve System



YOU CAN EARN \$50.00 PER DAY

with the Gearless Improved Standard Well Drilling Machine

Drills through any formation. Five years ahead of any other. Has record of drilling 130 feet and driving casing in 9 hours. Another record where 70 feet was drilled on 2 1-2 gallons distillate at 9¢ per gallon. One man can operate. Electrically equipped for running nights. Fishing job, Engine Ignition. Catalogue W-8. REIERSON MACHINERY CO., Mfgs., 1295-97 Hood St., Portland, Ore.

The advisory committee shall act in an advisory capacity to the Executive Secretary. This committee shall have power to call special meetings of the trustees. The advisory committee shall be called together at such times as may be deemed necessary by the Executive Secretary.

Article XI.—Membership Committee

The membership committee shall pass upon the qualifications of applicants for membership and report the findings of the committee to the Board of Trustees, who shall act upon the same at the first meeting after the presentation of the report of the membership committee.

Article XII.—Arbitration Committee

Sec. 1. The President shall appoint, at or immediately following the annual meeting, a committee of three to serve during the ensuing year as a committee of arbitration.

Sec. 2. Upon their appointment, the arbitration committee shall meet and elect a chairman from their own body. The Executive Secretary of the corporation may act as secretary of the committee, but if for any cause he is unable or does not act, the committee may appoint a clerk pro tem.

Sec. 3. The arbitration committee shall have power to fix the time and place of investigations or hearings on matters submitted to them, and shall further have power to determine the manner of hearing complaints, and shall notify both complainant and defendant of the time and place of hearings at least ten (10) days in advance of the date of any such hearing. The committee shall have power to dismiss complaints or continue hearings thereon and to adjourn its sessions from time to time as it may see fit, the complaining party and the person, firm or corporation against whom the complaint is made shall be entitled to appear in person or by attorney at all hearings, and to introduce evidence in support of their contentions. After hearing the evidence introduced and the arguments presented by the parties the committee shall make such further and independent investigation as it may see fit, and shall render its decision when it shall reach a conclusion in regard to the merits of the controversy. The decision of a majority of the committee to be decisive of any question or complaint submitted to it, and to be binding upon the parties involved. The costs and expenses of arbitrations and investigations shall be assessed by the committee against the parties thereto in such manner as a majority of the committee shall determine.

Sec. 4. In case of any member of the arbitration committee being a party to any controversy in dispute he shall be ineligible to act and his place shall be filled by appointment by the President of the corporation.

Sec. 5. No person, firm or corporation shall be entitled to a hearing before the arbitration committee unless one or both of the parties to the dispute is a member of this corporation.

One Horse Is Enough

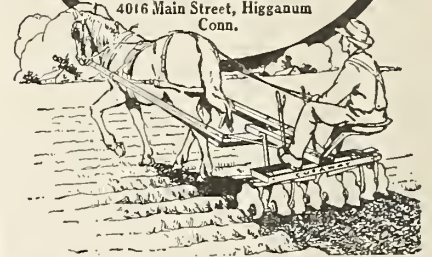
No need to lose dollars these days by incomplete tillage. If you have one horse—that is enough! You can do as good work as the big outfits on the largest farms, when you use one of the several types of light draft, 1-horse sizes of the

Cutaway (CLARK)

Disk Harrows

Disks, cutlery steel forged sharp; reversible gangs; dust-proof, oil-soaked hardwood bearings are a few of its features. If your dealer has not the genuine CUTAWAY, write direct. Send for free book "The Soil and Its Tillage," and for special folder illustrating one-horse implements.

The Cutaway Harrow Company
Maker of the original CLARK disk harrows and plows
4016 Main Street, Hingham Conn.



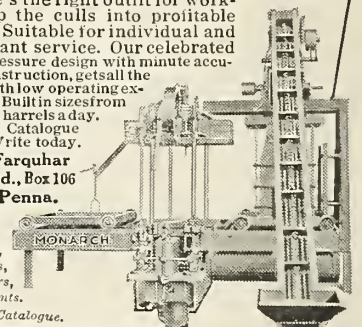
MONARCH CIDER PRESS

Here's the right outfit for working up the culls into profitable cider. Suitable for individual and merchant service. Our celebrated high pressure design with minute accurate construction, gets all the juice with low operating expense. Built in sizes from 15 to 400 barrels a day. 60-page Catalogue free. Write today.

A. B. Farquhar Co., Ltd., Box 106
York, Penna.

We also make Engines, Sawmills, Threshers, Implements.

Ask for Catalogue.



YOUR AXLES



NEED

C & S

Wheels may change, but C. & S. Axle Grease goes on forever. It's been the friend of the farmer for two generations.

Ask your dealer

WHITTIER-COBURN COMPANY
San Francisco

FREE

The liveliest little Engine Book ever published. Tells the principles of good engine construction so plain and so interesting that any man or boy will enjoy reading it. Write today.

WITTE ENGINE WORKS

1880 Oakland Ave.
Kansas City, Mo.
1880 Empire Bldg.
Pittsburgh, Pa.



All persons or firms entitled to a hearing before the arbitration committee shall file with the Secretary their evidence and an agreement in writing to submit their case to the committee and be bound by their decision or award. On such agreement being signed the Secretary shall notify the parties to the controversy when a meeting of the committee will be held to hear and decide their case.

Sec. 6. Any statement of grievance between members of this corporation involving a charge against a member of questionable mercantile conduct, or conduct unbecoming a member, may be filed with the Executive Secretary and by him shall be referred to the arbitration committee for investigation. If the charge is sustained, the committee may recommend that the member so charged may be reprimanded, suspended or expelled. The arbitration committee shall make its recommendations to the Board of Trustees and said offending member shall be dealt with at the discretion of the Board as hereinbefore provided.

Sec. 7. Any statement of grievance against a member of this corporation, made by a party not a member, involving a written and specific charge of questionable mercantile conduct, may be filed with the Executive Secretary accompanied with an agreement by the complainant (non-member) to present evidence and testimony to the arbitration committee to sustain such charge, and further agreeing to abide by the findings of the arbitration committee, and to pay the expense of the investigation and arbitration if his complaint is not sustained. Such documents shall be referred by the Executive Secretary to the arbitration committee for investigation. If the charge is sustained, the member so charged may be reprimanded, suspended or expelled. The arbitration committee shall make its findings and recommendations to the Board of Trustees and said offending member shall be dealt with at the discretion of the board.

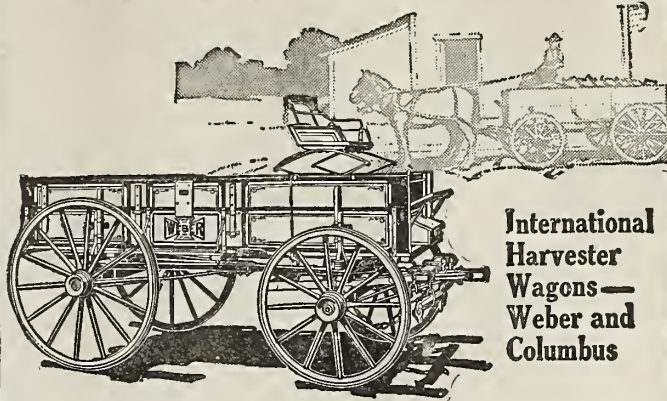
Sec. 8. Complaint of unfair methods or trade abuse may be preferred by any member of this corporation against any receiver, buyer, broker or commission man; such complaint must be made in writing and be filed with the Executive Secretary, who shall present it to the arbitration committee; such committee shall investigate said complaint, make findings thereon and report the same to the Board of Trustees and to the members of this corporation.

Article XIII.—Financing

Sec. 1. Budgets. All contemplated administrative and general expenditures for the fiscal year's operations which affect all the tonnage in the organization shall be made up in budget form by the Executive Secretary and presented to the members at their annual meeting for approval.

Sec. 2. Special Budgets. Special budgets must be prepared by the Executive Secretary to cover expenditures which affect special or unforeseen activities, and before becoming effective must

More for Your Money



International
Harvester
Wagons—
Weber and
Columbus



YOU can be sure of one thing when you buy a **Weber or Columbus wagon**—You get more service for your money. The good service they give is one of the strongest features of **Weber and Columbus** wagons. This service is the result of careful design and construction, such as is shown in the **International fifth wheel**.

Look between the front axle and bolster, where the king bolt goes through. There you will find the fifth wheel (an exclusive feature). Note the wide circular wearing surface of the two substantial fifth wheel plates. Those plates relieve the owner of a lot of trouble. They prevent breaking or bending of circle irons. They prevent the pitching of the bolster that breaks or bends king bolts. They take strain off the reach and keep the lower part of the front axle from sagging.

This one feature adds years to the life of the wagon, but, better even than that, it indicates the care and thought that have been given to every **Columbus and Weber** feature, and they are many.

Look over the **Weber or Columbus** wagon carefully, either at the local dealer's place or in the illustrated wagon folders we will send you on request. Then you will see why, if you want more for your money, your next wagon should be a **Weber or Columbus**.

International Harvester Company of America

(INCORPORATED)

Crawford, Neb. Denver, Col. Helena, Mont. Portland, Ore.
San Francisco, Cal. Spokane, Wash. Salt Lake City, Utah

Arcadia Irrigated Orchards

THE LARGEST AND MOST SUCCESSFUL ORCHARD PROJECT
IN THE ENTIRE WEST

7,000 acres planted to winter apples. Gravity irrigation. Located 22 miles north of Spokane, Washington, directly on the railroad. We plant and give four years' care to every orchard tract sold. \$125, first payment, secures 5 acres; \$250, first payment, secures 10 acres; balance monthly.

SEND FOR BOOKLET

Arcadia Orchards Company

Deer Park, Washington

"BLUE RIBBON"

*Bartlett Pears
Elberta Peaches
Italian Prunes*

In straight or mixed cars.
All orders given careful and prompt attention.

Wire for Prices.

Yakima County Horticultural Union

FRED EBERLE, Manager

NORTH YAKIMA, WASHINGTON



**lighter, flakier
biscuits**

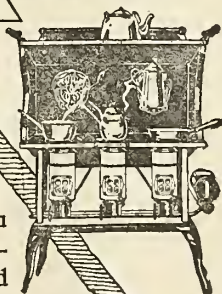
Steady, evenly distributed heat, under perfect control makes a good oil stove wonderful for baking.

NEW PERFECTION OIL COOK-STOVE

For Best
Results
Use
Pearl Oil

A good oil stove is just like cooking with city gas. If you haven't a New Perfection you've missed comfort for years. Bakes, broils, roasts, toasts. More efficient than your wood or coal stove, and costs less to operate. Cuts out the coal-hod and wood-box drudgery. Keeps your kitchen cool. The long blue chimneys prevent smoke or odor. In 1, 2, 3 and 4-burner sizes, ovens separate. Also Cabinet Models with Fireless Cooking Ovens. Ask your dealer today

STANDARD OIL COMPANY
(California)



be submitted to the trustees and selling agents for approval. Special budgets must be prepared by the Executive Secretary to cover expenditures which affect special or unforeseen activities, and before becoming effective must be approved by the Board of Trustees and those members whom they would affect.

Sec. 3. Assessments. Each selling agent member shall be assessed for the general and administrative budget in proportion to the estimated tonnage as ascertained at the closing of the contract period, such assessments to be finally adjusted at the end of the season on a basis of the actual tonnage handled by the member. For special budgets each selling agent member shall be assessed in proportion to his tonnage participating in the activities as provided for in the budget, such assessments to be adjusted in the same way as those of the general and administrative budget.

Sec. 4. Payments on assessments shall be made into the treasury of the corporation at such times and in such manner as may be provided for by the Board of Trustees.

Sec. 5. Neither the Executive Secretary nor any other officer nor employee shall have authority to bind the corporation with any acts or contracts or make any expenditures other than those provided for in approved budgets.

Article XIV.—Corporate Seal

The corporate seal of the corporation shall bear the inscription, "The Fruit Growers' Agency, Incorporated—Corporate Seal."

Will Sell Cheap

OUR FINE

Apple and Peach Orchard

All Peach and part of Apples now in bearing. 6 years old, 180 acres. Poor health cause of selling. Write for prices and particulars.

CHAS. E. OUTCALT, Alexandria, Virginia

PORTLAND WHOLESALE NURSERY COMPANY

Rooms 6 & 7, 122½ Grand Ave., Portland, Oregon

Wholesalers of Nursery Stock and Nursery Supplies

A very complete line of

Fruit and Ornamental Trees, Shrubs, Vines, Etc.

SPECIALTIES

Clean Coast Grown Seedlings

Oregon Champion Gooseberries and

Write Now

Perfection Currants

Write Now

The Paris Fair

HOOD RIVER'S LARGEST
AND BEST STORE

RETAILERS OF

EVERYTHING TO WEAR

AGENTS FOR

HAMILTON & BROWN AND

THE BROWN SHOES

HART, SCHAFFNER & MARX

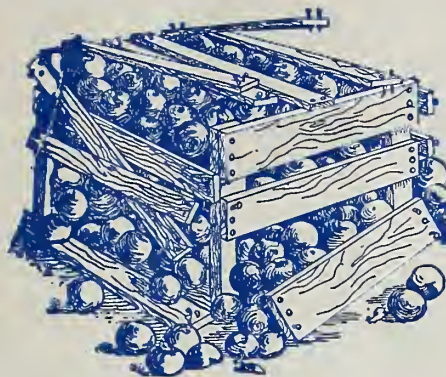
CLOTHES

MANHATTAN SHIRTS

JOHN B. STETSON HATS

NEMO CORSETS

Strictly Cash—One Price to All



BEFORE using Cement Coated Nails

Western Cement Coated Nails for Western Growers

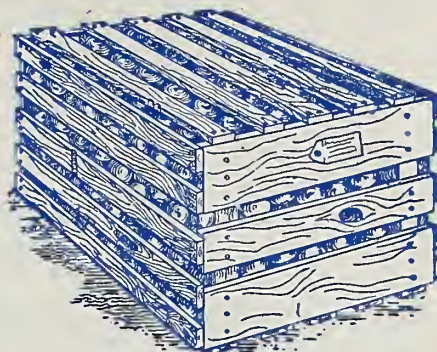
Our Cement Coated Nails are always of uniform length, gauge, head and count. Especially adapted to the manufacture of fruit boxes and crates. In brief, they are the Best on the Market.

Write for Growers' testimonials.

Colorado Fuel & Iron Co.

DENVER, COLORADO

Pacific Coast Sales Offices
Portland, Spokane, San Francisco
Los Angeles



AFTER use of C. F. & I. Co.'s
Cement Coated Nails.

We have an attractive
Agents proposition.



Buy Now for Your
Peach Packing
Use Later for Your
Apples

A practical labor saving device for the progressive fruit grower. Increase the attractiveness of your package and you naturally increase your financial returns. Just think all the five stamps placed on the box at one operation and in a neat, uniform way. Always in line with a clear impression of the type. Nothing upside down or half printed. Stamps variety, grade, number, grower's name and address and net weight in **one second**. Inks itself each time for the next box. Can not get out of order. **Will work on any kind of press.** We have not the space to tell you of all its wonderful features. Write and we will be pleased to send literature. Price, prepaid, with necessary bands, stamps, etc., **\$8.00.**

Practical Box Marker Co.
Otis Orchards, Wash.

Marketing Your Crop!

The great problem facing the grower is the marketing of his crop. Be Up-To-Date and CAN it. This insures you against loss from glutted markets and makes your fruits imperishable. You can do this at home with your own help with an H. & A. Steam Pressure Canning Outfit, Family, Orchard or Commercial size. Our recipe book tells you how to can everything eatable that goes into cans with the outfit. Write for descriptive matter to the manufacturers.

Henninger & Ayes Mfg. Co.

47 First Street PORTLAND, OREGON

Pacific Coast Agents
**United States Steel
Products Co.**

San Francisco
Los Angeles
Portland
Seattle



J.C. Pearson Co., Inc.
Sole Manufacturers

Old South Bldg.
Boston,
Mass.

PEARSON
ECONOMY in buying is getting the best value for the money, not always in getting the lowest prices. PEARSON prices are right.
ADHESIVENESS or holding power is the reason for PEARSON nails. For twenty years they have been making boxes strong. Now, more than ever.
RELIABILITY behind the goods is added value. You can rely on our record of fulfillment of every contract and fair adjustment of every claim.
SATISFACTION is assured by our long experience in making nails to suit our customers' needs. We know what you want; we guarantee satisfaction.
ORIGINALITY plus experience always excels imitation. Imitation's highest hope is, to sometime (not now) equal Pearson—meantime *you* play safe.
N A I L S

LESLIE BUTLER, President
TRUMAN BUTLER, Vice President
C. H. VAUGHAN, Cashier

Established 1900

Butler Banking Company

HOOD RIVER, OREGON

Capital \$100,000.00

4% Interest Paid in our Savings Department

WE GIVE SPECIAL ATTENTION TO GOOD FARM LOANS

If you have money to loan we will find you good real estate security, or if you want to borrow we can place your application in good hands, and we make no charge for this service.

THE OLDEST BANK IN HOOD RIVER VALLEY

Things We Are Agents for

KNOX HATS
ALFRED BENJAMIN & CO.'S
CLOTHING
DR. JAEGER UNDERWEAR
DR. DEIMEL
LINEN MESH UNDERWEAR
DENT'S AND FOWNES'
GLOVES

Buffum & Pendleton

311 Morrison Street
PORTLAND, OREGON

THE WORLD-
OUR ORCHARD

STEINHARDT & KELLY

NEW YORK

UNQUESTIONABLY THE
MOST IMPORTANT FACTOR
IN THE DISTRIBUTION OF
THE COUNTRY'S FANCY
APPLES
AND OTHER FRUITS

OUR MARKET-
THE WORLD